



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/720,848	11/24/2003	John J. Viola	63134/P001CP2/10309809	3611
74243	7590	07/03/2008		
Slater & Matsil, L.L.P. 17950 Preston Road, Suite 1000 Dallas, TX 75252				
EXAMINER				
DWIVEDI, MAHESH H				
ART UNIT		PAPER NUMBER		
2168				
MAIL DATE		DELIVERY MODE		
07/03/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/720,848

Applicant(s)

VIOLA ET AL.

Examiner

MAHESH H. DWIVEDI

Art Unit

2168

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32, 34-46 and 55-63 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32, 34-46 and 55-63 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/5/2006 has been entered.

Remarks

2. Receipt of Applicant's Amendment filed on 08/31/2007 is acknowledged. The amendment includes the amending of claims 32 and 38, the cancellation of claims 33, and 47-54, the addition of claims 55-63, and the amending of the specification.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claim 62 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The examiner specifically points to "**fuzzy logic**" as being directed towards nonstatutory subject matter.

The claims lack the necessary physical articles or objects to constitute a machine or a manufacture within the meaning of 101. They are clearly not a series of steps or acts to be a process nor are they a combination of chemical compounds to be a composition of matter. As such, they fail to fall within a statutory category. They are, at best, function descriptive material *per se*.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the

subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-2, 5-9, 11, 15-20, 25, 29, 32, 34-40, 42, 55, 57-60, and 62-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Wyzga et al.** (U.S. PGPUB 20020107871) and in view of **Stack** (U.S. Patent 6,782,370).

7. Regarding claim 1, **Wyzga** teaches a method comprising:

- A) providing electronic access to a plurality of databases (Paragraphs 46-49, Figure 7);
- B) accepting search information vector data from a user (Paragraphs 31-32, Figures 3 and 5);
- C) utilizing said information vector data to access at least one database of said plurality of databases to identify at least a portion of said useful data therein (Paragraph 36, Figure 4).

The examiner notes that **Wyzga** teaches “**providing electronic access to a plurality of databases**” as “Police Department B 706 and Police Department C 708 are other police departments. Police Department B 706 and Police Department C 708 share multiple databases B, C 710. Databases B, C 710 are other databases designed in accordance with the present invention. Police Department B 706 and Police Department C 708 can run queries on databases B, C 710 and information returned could contain data derived from Police Department B 706 and Police Department C 708” (Paragraph 48) and “Police Department A is also able to access databases B, C 710 via connection 703. Connection 703 can be any wired or wireless connection, direct or over a network. In some embodiments of this invention, this connection can be encrypted and secured. In one embodiment the connection is over the Internet wherein a user at Police Department A 702 is using a web browser to access databases B, C, 710” (Paragraph 49). The examiner further notes that **Wyzga** teaches “**accepting search information vector data from a user**” as “The police officer utilizing the search system enters as much information as is available. For example, the police officer may have a partial first

name of a suspect such as "Ed" provided by a witness. The officer, after accessing the person search form, would enter the name "Ed" into the first name block. Since "Ed" may be a common nickname, the officer could enter the name "Ed" along with a symbol that means to search for Ed and all first names that begin with "Ed", such as the wildcard symbol "*" (Paragraph 32). The examiner further notes that **Wyzga** teaches **"utilizing said information vector data to access at least one database of said plurality of databases to identify at least a portion of said useful data therein"** as "FIG. 4 shows an exemplary result page 400 for a connect search. Illustrated are a result section 402 and a search history section 404. The result section 402 lists the search results in a table. All first names starting with "Ed" are listed along with the incident number the person is related to, the date of birth of the person if available, the height and weight of the individual if available, known gang affiliation if any and whether a mug shot is available. More details about the individual or incident can be selected and viewed. History section 404 keeps track of executed searches" (Paragraph 36).

Wyzga does not explicitly teach:

- D) utilizing said at least a portion of said useful data identified in said at least one database using said information vector to access at least another database of said plurality of databases to identify another portion of said useful data therein;
- E) wherein said another portion of said useful data is not directly identified from said information vector; and
- F) wherein said utilizing said at least a portion of said useful data is performed automatically without input from said user to direct access with respect to said at least another database.

Stack, however, teaches **"utilizing said at least a portion of said useful data identified in said at least one database using said information vector to access at least another database of said plurality of databases to identify another portion of said useful data therein"** as "The host computer 3 contains information regarding goods or services (such as books) for sale and also contains a customer purchasing history database 4 which stores data describing all purchases of previous customers" (Column 2, lines 58-62) and "The user may utilize any of these methods to select a

particular title. In FIG. 3C, a user has selected the title Clear and Present Danger by author Tom Clancy. As shown in FIG. 3C, any particular title may be available in a number of different formats or editions. Once a specific title is selected from among the choices in FIG. 3C, the host computer 3 determines if there are any possible recommendations available for this particular book. If no other books are available as recommendations, the host computer will not give the user the option to request recommendations; the user can still purchase the selected title or request other information concerning this book. If other books are available as recommendations the option to request recommendations is supplied to the user in the form of a hypertext display as shown in FIG. 3D as the Affinity™ service. The system determines whether other books are available to be recommended by consulting the customer history database 4. The customer history database includes three relational database tables consisting of Customers, Orders and Items. The tables are related to each by keying unique customer IDs in the Customer table to order numbers in the Orders table and product identification numbers in the Items table. For example, books may be identified by their unique ISBN in the Items table. When a user has selected a particular book, the system searches the database 4 to determine all previous customers who have purchased that book. If there exist in the database at least two other customers who have purchased the user-selected book and those at least two customers have also purchased other books (or other products) in common, then the Affinity™ hypertext link will appear in the display page for the selected book" (Column 3, lines 14-45), **"wherein said another portion of said useful data is not directly identified from said information vector"** as "The user may utilize any of these methods to select a particular title. In FIG. 3C, a user has selected the title Clear and Present Danger by author Tom Clancy. As shown in FIG. 3C, any particular title may be available in a number of different formats or editions. Once a specific title is selected from among the choices in FIG. 3C, the host computer 3 determines if there are any possible recommendations available for this particular book. If no other books are available as recommendations, the host computer will not give the user the option to request recommendations; the user can still purchase the selected title or request other

information concerning this book. If other books are available as recommendations the option to request recommendations is supplied to the user in the form of a hypertext display as shown in FIG. 3D as the Affinity™ service. The system determines whether other books are available to be recommended by consulting the customer history database 4. The customer history database includes three relational database tables consisting of Customers, Orders and Items. The tables are related to each by keying unique customer IDs in the Customer table to order numbers in the Orders table and product identification numbers in the Items table. For example, books may be identified by their unique ISBN in the Items table. When a user has selected a particular book, the system searches the database 4 to determine all previous customers who have purchased that book. If there exist in the database at least two other customers who have purchased the user-selected book and those at least two customers have also purchased other books (or other products) in common, then the Affinity™ hypertext link will appear in the display page for the selected book" (Column 3, lines 14-45), and **"wherein said utilizing said at least a portion of said useful data is performed automatically without input from said user to direct access with respect to said at least another database"** as "The user may utilize any of these methods to select a particular title. In FIG. 3C, a user has selected the title Clear and Present Danger by author Tom Clancy. As shown in FIG. 3C, any particular title may be available in a number of different formats or editions. Once a specific title is selected from among the choices in FIG. 3C, the host computer 3 determines if there are any possible recommendations available for this particular book. If no other books are available as recommendations, the host computer will not give the user the option to request recommendations; the user can still purchase the selected title or request other information concerning this book. If other books are available as recommendations the option to request recommendations is supplied to the user in the form of a hypertext display as shown in FIG. 3D as the Affinity™ service. The system determines whether other books are available to be recommended by consulting the customer history database 4. The customer history database includes three relational database tables consisting of Customers, Orders and Items. The tables are related to each by keying

unique customer IDs in the Customer table to order numbers in the Orders table and product identification numbers in the Items table. For example, books may be identified by their unique ISBN in the Items table. When a user has selected a particular book, the system searches the database 4 to determine all previous customers who have purchased that book. If there exist in the database at least two other customers who have purchased the user-selected book and those at least two customers have also purchased other books (or other products) in common, then the Affinity™ hypertext link will appear in the display page for the selected book" (Column 3, lines 14-45).

The examiner notes that the recommendations of **Stack's** system in Figure 3E are clearly not directly queried from the user (the original query was "Clear and Present Danger").

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Stack's** would have allowed **Wynga's** to provide a method to improve the efficiency querying from users by substantially reducing the degree of customer input, as noted by **Stack** (Column 1, lines 36-40).

Regarding claim 2, **Wynga** further teaches a method comprising:

A) wherein said plurality of databases comprise a plurality of law enforcement databases (Paragraphs 46-49, Figure 7).

The examiner notes that **Wynga** teaches "**wherein said plurality of databases comprise a plurality of law enforcement databases**" as "Police Department B 706 and Police Department C 708 are other police departments. Police Department B 706 and Police Department C 708 share multiple databases B, C 710. Databases B, C 710 are other databases designed in accordance with the present invention. Police Department B 706 and Police Department C 708 can run queries on databases B, C 710 and information returned could contain data derived from Police Department B 706 and Police Department C 708" (Paragraph 48) and "Police Department A is also able to access databases B, C 710 via connection 703. Connection 703 can be any wired or wireless connection, direct or over a network. In some embodiments of this invention,

this connection can be encrypted and secured. In one embodiment the connection is over the Internet wherein a user at Police Department A 702 is using a web browser to access databases B, C, 710" (Paragraph 49).

Regarding claim 5, **Wyzga** further teaches a method comprising:

A) wherein one or more of said plurality of databases are geographically dispersed (Paragraphs 46-49, Figure 7).

The examiner notes that **Wyzga** teaches "**wherein one or more of said plurality of databases are geographically dispersed**" as "Police Department B 706 and Police Department C 708 are other police departments. Police Department B 706 and Police Department C 708 share multiple databases B, C 710. Databases B, C 710 are other databases designed in accordance with the present invention. Police Department B 706 and Police Department C 708 can run queries on databases B, C 710 and information returned could contain data derived from Police Department B 706 and Police Department C 708" (Paragraph 48) and "Police Department A is also able to access databases B, C 710 via connection 703. Connection 703 can be any wired or wireless connection, direct or over a network. In some embodiments of this invention, this connection can be encrypted and secured. In one embodiment the connection is over the Internet wherein a user at Police Department A 702 is using a web browser to access databases B, C, 710" (Paragraph 49).

Regarding claim 6, **Wyzga** further teaches a method comprising:

A) wherein said electronic access is provided at least through a justice information network (Paragraphs 46-49, Figure 7).

The examiner notes that **Wyzga** teaches "**wherein said electronic access is provided at least through a justice information network**" as "Police Department B 706 and Police Department C 708 are other police departments. Police Department B 706 and Police Department C 708 share multiple databases B, C 710. Databases B, C 710 are other databases designed in accordance with the present invention. Police Department B 706 and Police Department C 708 can run queries on databases B, C

710 and information returned could contain data derived from Police Department B 706 and Police Department C 708" (Paragraph 48) and "Police Department A is also able to access databases B, C 710 via connection 703. Connection 703 can be any wired or wireless connection, direct or over a network. In some embodiments of this invention, this connection can be encrypted and secured. In one embodiment the connection is over the Internet wherein a user at Police Department A 702 is using a web browser to access databases B, C, 710" (Paragraph 49).

Regarding claim 7, **Wyzga** further teaches a method comprising:

A) wherein said justice information network provides information communication between a plurality of information management systems disposed at different sites for providing data processing functionality for associated ones of said different sites (Paragraphs 46-49, Figure 7).

The examiner notes that **Wyzga** teaches **"wherein said justice information network provides information communication between a plurality of information management systems disposed at different sites for providing data processing functionality for associated ones of said different sites"** as "Police Department B 706 and Police Department C 708 are other police departments. Police Department B 706 and Police Department C 708 share multiple databases B, C 710. Databases B, C 710 are other databases designed in accordance with the present invention. Police Department B 706 and Police Department C 708 can run queries on databases B, C 710 and information returned could contain data derived from Police Department B 706 and Police Department C 708" (Paragraph 48) and "Police Department A is also able to access databases B, C 710 via connection 703. Connection 703 can be any wired or wireless connection, direct or over a network. In some embodiments of this invention, this connection can be encrypted and secured. In one embodiment the connection is over the Internet wherein a user at Police Department A 702 is using a web browser to access databases B, C, 710" (Paragraph 49).

Regarding claim 8, **Wyzga** further teaches a method comprising:

A) wherein **said different sites** includes sites selected from the group consisting of government offices, investigative services, and prison facilities (Paragraphs 46-49, Figure 7).

The examiner notes that **Wyzga** teaches **“wherein said different sites includes sites selected from the group consisting of government offices, investigative services, and prison facilities”** as “Police Department B 706 and Police Department C 708 are other police departments. Police Department B 706 and Police Department C 708 share multiple databases B, C 710. Databases B, C 710 are other databases designed in accordance with the present invention. Police Department B 706 and Police Department C 708 can run queries on databases B, C 710 and information returned could contain data derived from Police Department B 706 and Police Department C 708” (Paragraph 48) and “Police Department A is also able to access databases B, C 710 via connection 703. Connection 703 can be any wired or wireless connection, direct or over a network. In some embodiments of this invention, this connection can be encrypted and secured. In one embodiment the connection is over the Internet wherein a user at Police Department A 702 is using a web browser to access databases B, C, 710” (Paragraph 49).

Regarding claim 9, **Wyzga** further teaches a method comprising:

A) wherein search information vectors for which said search information vector data is accepted comprise contacts information (Paragraphs 31, Figure 3).

The examiner notes that **Wyzga** teaches **“wherein search information vectors for which said search information vector data is accepted comprise contacts information”** as “FIG. 3 is an exemplary search page for retrieving search parameters for searching the connect/detect database 106. Illustrated is a connect search screen 300 having a search from section 302 and a search history section 304. Search form 302 includes a race box 305, a last name/organization box 306, a sex box 307, a first name box 308, a middle name/initial box 309, a role box 310 for selecting the role of the individual such as suspect, victim, etc., an age box 311, a date of birth box 312, a height box 313, a phone number box 314, a weight box 315, a social security number box 316,

a hair color box 317, an eye color box 319, a license box 323 for entering a driver license number, and a date box 325" (Paragraph 31).

Regarding claim 11, **Wyzga** further teaches a method comprising:

A) wherein search information vectors for which said search information vector data is accepted comprise suspect information (Paragraphs 31, Figure 3).

The examiner notes that **Wyzga** teaches "**wherein search information vectors for which said search information vector data is accepted comprise suspect information**" as "FIG. 3 is an exemplary search page for retrieving search parameters for searching the connect/detect database 106. Illustrated is a connect search screen 300 having a search from section 302 and a search history section 304. Search form 302 includes a race box 305, a last name/organization box 306, a sex box 307, a first name box 308, a middle name/initial box 309, a role box 310 for selecting the role of the individual such as suspect, victim, etc., an age box 311, a date of birth box 312, a height box 313, a phone number box 314, a weight box 315, a social security number box 316, a hair color box 317, an eye color box 319, a license box 323 for entering a driver license number, and a date box 325" (Paragraph 31).

Regarding claim 15, **Wyzga** further teaches a method comprising:

A) wherein search information vectors for which said search information vector data is accepted comprise public data (Figure 5).

The examiner notes that **Wyzga** teaches "**wherein search information vectors for which said search information vector data is accepted comprise public data information**" as "License Plate" (Figure 5). The examiner further notes that search box License Plate in Figure 5 allows a registered user to search for public information such as a license plate.

Regarding claim 16, **Wyzga** further teaches a method comprising:

A) wherein said at least a portion of said useful data is identified by a confluence of search information vectors (Paragraphs 40 and 43, Figure 5).

The examiner notes that **Wyzga** teaches “**wherein said at least a portion of said useful data is identified by a confluence of search information vectors**” as “Detect search page 500 includes a search form section 502 and a detect search section 504. In search form section 504 a user can enter the term or object along with the specifics about the object such as “vehicle-white pickup” in the blanks of section 504. Then, by selecting the add button, the search term is added to the detect search section 504. The user can then check what objects to search for that are associated with the object or term being searched on in search for box 507. For example, the user can check the boxes for person, location or incident to see if the search object-“vehicle-white pickup” is related to any person, location or incident. The user can also limit the search to certain crime type by selecting limited to crime types box 508. The user will then select run search button 506. Different search pages can be selected by choosing tabs 503. The different pages can be a vehicle search page, an incident search page, a person search page, a property search page and a location search page” (Paragraph 40) and “Detect result screen 600 of FIG. 6 includes a result section 604 that will list objects that are related to the detect search object. For example, one or more persons might be related to the “vehicle-white pickup” as entered into the search. The names of these persons will then be listed in the result section 604. The result section 604 will also include a summary section 602 that lists how many vehicles, locations, persons and incidents were found that were related to the search term or object” (Paragraph 43).

Regarding claim 17, **Wyzga** does not explicitly teach a method comprising:

A) wherein said another portion of said useful data is identified by a confluence of search information vectors.

Stack, however, teaches “**wherein said another portion of said useful data is identified by a confluence of search information vectors**” as “The user may utilize any of these methods to select a particular title. In FIG. 3C, a user has selected the title Clear and Present Danger by author Tom Clancy. As shown in FIG. 3C, any particular title may be available in a number of different formats or editions. Once a specific title is selected from among the choices in FIG. 3C, the host computer 3 determines if there

are any possible recommendations available for this particular book. If no other books are available as recommendations, the host computer will not give the user the option to request recommendations; the user can still purchase the selected title or request other information concerning this book. If other books are available as recommendations the option to request recommendations is supplied to the user in the form of a hypertext display as shown in FIG. 3D as the Affinity™ service. The system determines whether other books are available to be recommended by consulting the customer history database 4. The customer history database includes three relational database tables consisting of Customers, Orders and Items. The tables are related to each by keying unique customer IDs in the Customer table to order numbers in the Orders table and product identification numbers in the Items table. For example, books may be identified by their unique ISBN in the Items table. When a user has selected a particular book, the system searches the database 4 to determine all previous customers who have purchased that book. If there exist in the database at least two other customers who have purchased the user-selected book and those at least two customers have also purchased other books (or other products) in common, then the Affinity™ hypertext link will appear in the display page for the selected book. If the search does not find at least two customers who have purchased the selected book and who have also purchased another book in common, the Affinity™ hypertext link will not appear in the display page. Once the user activates the Affinity™ hypertext link, the books purchased in common will be displayed, as shown in FIG. 3E" (Column 3, lines 14-50, Figures 3C-3E).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Stack's** would have allowed **Wynga's** to provide a method to improve the efficiency querying from users by substantially reducing the degree of customer input, as noted by **Stack** (Column 1, lines 36-40).

Regarding claim 18, **Wynga** does not explicitly teach a method comprising:

A) presenting said at least a portion of said useful data and said another portion of said useful data to said user.

Stack, however, teaches “**presenting said at least a portion of said useful data and said another portion of said useful data to said user**” as “The user may utilize any of these methods to select a particular title. In FIG. 3C, a user has selected the title Clear and Present Danger by author Tom Clancy. As shown in FIG. 3C, any particular title may be available in a number of different formats or editions. Once a specific title is selected from among the choices in FIG. 3C, the host computer 3 determines if there are any possible recommendations available for this particular book. If no other books are available as recommendations, the host computer will not give the user the option to request recommendations; the user can still purchase the selected title or request other information concerning this book. If other books are available as recommendations the option to request recommendations is supplied to the user in the form of a hypertext display as shown in FIG. 3D as the Affinity™ service. The system determines whether other books are available to be recommended by consulting the customer history database 4. The customer history database includes three relational database tables consisting of Customers, Orders and Items. The tables are related to each by keying unique customer IDs in the Customer table to order numbers in the Orders table and product identification numbers in the Items table. For example, books may be identified by their unique ISBN in the Items table. When a user has selected a particular book, the system searches the database 4 to determine all previous customers who have purchased that book. If there exist in the database at least two other customers who have purchased the user-selected book and those at least two customers have also purchased other books (or other products) in common, then the Affinity™ hypertext link will appear in the display page for the selected book. If the search does not find at least two customers who have purchased the selected book and who have also purchased another book in common, the Affinity™ hypertext link will not appear in the display page. Once the user activates the Affinity™ hypertext link, the books purchased in common will be displayed, as shown in FIG. 3E” (Column 3, lines 14-50, Figures 3C-3E).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Stack's** would have allowed **Wyzga's** to provide a method to improve the efficiency querying from users by substantially reducing the degree of customer input, as noted by **Stack** (Column 1, lines 36-40).

Regarding claim 19, **Wyzga** does not explicitly teach a method comprising:

A) wherein said at least a portion of said useful data and said another portion of said useful data is presented graphically.

Stack, however, teaches “**wherein said at least a portion of said useful data and said another portion of said useful data is presented graphically**” as “The user may utilize any of these methods to select a particular title. In FIG. 3C, a user has selected the title Clear and Present Danger by author Tom Clancy. As shown in FIG. 3C, any particular title may be available in a number of different formats or editions. Once a specific title is selected from among the choices in FIG. 3C, the host computer 3 determines if there are any possible recommendations available for this particular book. If no other books are available as recommendations, the host computer will not give the user the option to request recommendations; the user can still purchase the selected title or request other information concerning this book. If other books are available as recommendations the option to request recommendations is supplied to the user in the form of a hypertext display as shown in FIG. 3D as the Affinity™ service. The system determines whether other books are available to be recommended by consulting the customer history database 4. The customer history database includes three relational database tables consisting of Customers, Orders and Items. The tables are related to each by keying unique customer IDs in the Customer table to order numbers in the Orders table and product identification numbers in the Items table. For example, books may be identified by their unique ISBN in the Items table. When a user has selected a particular book, the system searches the database 4 to determine all previous customers who have purchased that book. If there exist in the database at least two other customers who have purchased the user-selected book and those at least two

customers have also purchased other books (or other products) in common, then the Affinity™ hypertext link will appear in the display page for the selected book. If the search does not find at least two customers who have purchased the selected book and who have also purchased another book in common, the Affinity™ hypertext link will not appear in the display page. Once the user activates the Affinity™ hypertext link, the books purchased in common will be displayed, as shown in FIG. 3E" (Column 3, lines 14-50, Figures 3C-3E).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Stack's** would have allowed **Wyzga's** to provide a method to improve the efficiency querying from users by substantially reducing the degree of customer input, as noted by **Stack** (Column 1, lines 36-40).

Regarding claim 20, **Wyzga** does not explicitly teach a method comprising:
A) wherein said graphical presentation includes graphically showing details with respect to the relationship between said at least a portion of said useful data and said another portion of said useful data.

Stack, however, teaches "**wherein said graphical presentation includes graphically showing details with respect to the relationship between said at least a portion of said useful data and said another portion of said useful data**" as "Another aspect of the invention is the indication of a "confidence match" factor as shown in FIG. 3E. The confidence factor is calculated based on the frequency of appearance of the recommended books (or other items) in the histories of the customers who have purchased the selected book (or other item). For example, if ten customers who purchased book A also purchased book B, the confidence factor in the recommendation of book B to a user who selected book A would be 100%. If on the other hand only 7 of the ten customers who purchased book A also purchased book B, the confidence factor for book B would be 70%. As previously explained above, if none of the customers who purchased book A also purchased at least one other book in

Art Unit: 2169

common, the Affinity™ hypertext link would not be displayed" (Column 3, lines 51-65, Figure 3E).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Stack's** would have allowed **Wyzga's** to provide a method to improve the efficiency querying from users by substantially reducing the degree of customer input, as noted by **Stack** (Column 1, lines 36-40).

Regarding claim 25, **Wyzga** further teaches a method comprising:

A) wherein said at least a portion of said useful data and said another portion of said useful data are presented to said user as a dossier of an individual (Paragraph 36, Figures 4 and 6).

The examiner notes that **Wyzga** teaches "**wherein said at least a portion of said useful data and said another portion of said useful data are presented to said user as a dossier of an individual**" as "All first names starting with "Ed" are listed along with the incident number the person is related to, the date of birth of the person if available, the height and weight of the individual if available, known gang affiliation if any and whether a mug shot is available. More details about the individual or incident can be selected and viewed. History section 404 keeps track of executed searches. Different icons 406 can be provided to provide a visual aid as to what type of person is identified. For example an "I" could mean the person was wanted, two heads and a gun may mean the person is part of a gang and a single head may mean a mug shot is available" (Paragraph 36).

Regarding claim 29, **Wyzga** does not explicitly teach a method comprising:

A) wherein said utilizing said at least a portion of said useful data from said at least one database to access at least another database of said plurality of databases to identify another portion of said useful data therein comprises pattern matching to identify said another portion of said useful data.

Stack, however, teaches “**wherein said utilizing said at least a portion of said useful data from said at least one database to access at least another database of said plurality of databases to identify another portion of said useful data therein comprises pattern matching to identify said another portion of said useful data**” as “The user may utilize any of these methods to select a particular title. In FIG. 3C, a user has selected the title Clear and Present Danger by author Tom Clancy. As shown in FIG. 3C, any particular title may be available in a number of different formats or editions. Once a specific title is selected from among the choices in FIG. 3C, the host computer 3 determines if there are any possible recommendations available for this particular book. If no other books are available as recommendations, the host computer will not give the user the option to request recommendations; the user can still purchase the selected title or request other information concerning this book. If other books are available as recommendations the option to request recommendations is supplied to the user in the form of a hypertext display as shown in FIG. 3D as the AffinityTM service. The system determines whether other books are available to be recommended by consulting the customer history database 4. The customer history database includes three relational database tables consisting of Customers, Orders and Items. The tables are related to each by keying unique customer IDs in the Customer table to order numbers in the Orders table and product identification numbers in the Items table. For example, books may be identified by their unique ISBN in the Items table. When a user has selected a particular book, the system searches the database 4 to determine all previous customers who have purchased that book. If there exist in the database at least two other customers who have purchased the user-selected book and those at least two customers have also purchased other books (or other products) in common, then the AffinityTM hypertext link will appear in the display page for the selected book. If the search does not find at least two customers who have purchased the selected book and who have also purchased another book in common, the AffinityTM hypertext link will not appear in the display page. Once the user activates the AffinityTM hypertext link, the books purchased in common will be displayed, as shown in FIG. 3E” (Column 3, lines 14-50, Figures 3C-3E).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Stack's** would have allowed **Wyzga's** to provide a method to improve the efficiency querying from users by substantially reducing the degree of customer input, as noted by **Stack** (Column 1, lines 36-40).

Regarding claim 32, **Wyzga** teaches a method comprising:

- A) utilizing a plurality of search information vectors to identify said useful data in said at least one database relevant to a particular query input by a user (Paragraph 40, Figures 5-6);
- B) wherein at least one search information vector of said plurality of search information vectors is associated with different search directions (Paragraph 40, Figures 5-6); and
- C) identifying confluence of portions of said useful data identified by said plurality of search information vectors (Paragraphs 40 & 43, Figures 5-6).

The examiner notes that **Wyzga** teaches “**utilizing a plurality of search information vectors to identify said useful data in said at least one database relevant to a particular query input by a user**” as “Detect search page 500 includes a search form section 502 and a detect search section 504. In search form section 504 a user can enter the term or object along with the specifics about the object such as “vehicle-white pickup” in the blanks of section 504. Then, by selecting the add button, the search term is added to the detect search section 504. The user can then check what objects to search for that are associated with the object or term being searched on in search for box 507. For example, the user can check the boxes for person, location or incident to see if the search object-“vehicle-white pickup” is related to any person, location or incident. The user can also limit the search to certain crime type by selecting limited to crime types box 508. The user will then select run search button 506. Different search pages can be selected by choosing tabs 503. The different pages can be a vehicle search page, an incident search page, a person search page, a property search page and a location search page” (Paragraph 40, Figure 5). The examiner further notes that **Wyzga** teaches “**wherein at least one search information vector of said**

plurality of search information vectors is associated with different search directions" as "Detect search page 500 includes a search form section 502 and a detect search section 504. In search form section 504 a user can enter the term or object along with the specifics about the object such as "vehicle-white pickup" in the blanks of section 504. Then, by selecting the add button, the search term is added to the detect search section 504. The user can then check what objects to search for that are associated with the object or term being searched on in search for box 507. For example, the user can check the boxes for person, location or incident to see if the search object-"vehicle-white pickup" is related to any person, location or incident. The user can also limit the search to certain crime type by selecting limited to crime types box 508. The user will then select run search button 506. Different search pages can be selected by choosing tabs 503. The different pages can be a vehicle search page, an incident search page, a person search page, a property search page and a location search page" (Paragraph 40, Figure 5). Moreover, the examiner further wishes to state that boxes 507 and 508 of **Wyzga** clearly shows the ability to search in different directions at a user's discretion by limiting the search to desired crime types of specific properties. The examiner further wishes to state that it is clear from the interface of Figure 5 that different queries from the different search directions (Person, Location, Vehicle, Property, and Incident) can be added to box 504 for a multi-directional search nonetheless. The examiner further notes that **Wyzga** teaches **"identifying confluence of portions of said useful data identified by said plurality of search information vectors"** as "Detect search page 500 includes a search form section 502 and a detect search section 504. In search form section 504 a user can enter the term or object along with the specifics about the object such as "vehicle-white pickup" in the blanks of section 504. Then, by selecting the add button, the search term is added to the detect search section 504. The user can then check what objects to search for that are associated with the object or term being searched on in search for box 507. For example, the user can check the boxes for person, location or incident to see if the search object-"vehicle-white pickup" is related to any person, location or incident. The user can also limit the search to certain crime type by selecting limited to crime types

box 508. The user will then select run search button 506. Different search pages can be selected by choosing tabs 503. The different pages can be a vehicle search page, an incident search page, a person search page, a property search page and a location search page" (Paragraph 40) and "Detect result screen 600 of FIG. 6 includes a result section 604 that will list objects that are related to the detect search object. For example, one or more persons might be related to the "vehicle-white pickup" as entered into the search. The names of these persons will then be listed in the result section 604. The result section 604 will also include a summary section 602 that lists how many vehicles, locations, persons and incidents were found that were related to the search term or object" (Paragraph 43). The examiner further wishes to state that the result page of Figure 6 clearly shows the intersection (confluence) of query with respect to the vehicle, location, and incident directions. The examiner further notes that the Person, Location, Vehicle, Property, and Incident tabs of **Wyzga's** system each constitute different search directions. Moreover, the examiner further wishes to state that boxes 507 and 508 of **Wyzga** clearly shows the ability to search in different directions at a user's discretion by limiting the search to desired crime types of specific properties. The examiner further wishes to state that it is clear from the interface of Figure 5 that different queries from the different search directions (Person, Location, Vehicle, Property, and Incident) can be added to box 504 for a multi-directional search nonetheless.

Wyzga does not explicitly teach:

- D) utilizing said confluence of portions of said useful data to access one or more additional databases to identify another portion of said useful data;
- E) wherein said another portion of said useful data is not directly identified from said plurality of search information vectors; and
- F) wherein said utilizing said confluence is performed automatically without additional input from said user.

Stack, however, teaches "utilizing said confluence of portions of said useful data to access one or more additional databases to identify another portion of said useful data" as "The host computer 3 contains information regarding goods or

services (such as books) for sale and also contains a customer purchasing history database 4 which stores data describing all purchases of previous customers" (Column 2, lines 58-62) and "The user may utilize any of these methods to select a particular title. In FIG. 3C, a user has selected the title Clear and Present Danger by author Tom Clancy. As shown in FIG. 3C, any particular title may be available in a number of different formats or editions. Once a specific title is selected from among the choices in FIG. 3C, the host computer 3 determines if there are any possible recommendations available for this particular book. If no other books are available as recommendations, the host computer will not give the user the option to request recommendations; the user can still purchase the selected title or request other information concerning this book. If other books are available as recommendations the option to request recommendations is supplied to the user in the form of a hypertext display as shown in FIG. 3D as the Affinity™ service. The system determines whether other books are available to be recommended by consulting the customer history database 4. The customer history database includes three relational database tables consisting of Customers, Orders and Items. The tables are related to each by keying unique customer IDs in the Customer table to order numbers in the Orders table and product identification numbers in the Items table. For example, books may be identified by their unique ISBN in the Items table. When a user has selected a particular book, the system searches the database 4 to determine all previous customers who have purchased that book. If there exist in the database at least two other customers who have purchased the user-selected book and those at least two customers have also purchased other books (or other products) in common, then the Affinity™ hypertext link will appear in the display page for the selected book" (Column 3, lines 14-45), **"wherein said another portion of said useful data is not directly identified from said plurality of search information vectors"** as "The user may utilize any of these methods to select a particular title. In FIG. 3C, a user has selected the title Clear and Present Danger by author Tom Clancy. As shown in FIG. 3C, any particular title may be available in a number of different formats or editions. Once a specific title is selected from among the choices in FIG. 3C, the host computer 3 determines if there are any possible

recommendations available for this particular book. If no other books are available as recommendations, the host computer will not give the user the option to request recommendations; the user can still purchase the selected title or request other information concerning this book. If other books are available as recommendations the option to request recommendations is supplied to the user in the form of a hypertext display as shown in FIG. 3D as the Affinity™ service. The system determines whether other books are available to be recommended by consulting the customer history database 4. The customer history database includes three relational database tables consisting of Customers, Orders and Items. The tables are related to each by keying unique customer IDs in the Customer table to order numbers in the Orders table and product identification numbers in the Items table. For example, books may be identified by their unique ISBN in the Items table. When a user has selected a particular book, the system searches the database 4 to determine all previous customers who have purchased that book. If there exist in the database at least two other customers who have purchased the user-selected book and those at least two customers have also purchased other books (or other products) in common, then the Affinity™ hypertext link will appear in the display page for the selected book" (Column 3, lines 14-45), and **"wherein said utilizing said confluence is performed automatically without additional input from said user"** as "The user may utilize any of these methods to select a particular title. In FIG. 3C, a user has selected the title Clear and Present Danger by author Tom Clancy. As shown in FIG. 3C, any particular title may be available in a number of different formats or editions. Once a specific title is selected from among the choices in FIG. 3C, the host computer 3 determines if there are any possible recommendations available for this particular book. If no other books are available as recommendations, the host computer will not give the user the option to request recommendations; the user can still purchase the selected title or request other information concerning this book. If other books are available as recommendations the option to request recommendations is supplied to the user in the form of a hypertext display as shown in FIG. 3D as the Affinity™ service. The system determines whether other books are available to be recommended by consulting the customer history

database 4. The customer history database includes three relational database tables consisting of Customers, Orders and Items. The tables are related to each by keying unique customer IDs in the Customer table to order numbers in the Orders table and product identification numbers in the Items table. For example, books may be identified by their unique ISBN in the Items table. When a user has selected a particular book, the system searches the database 4 to determine all previous customers who have purchased that book. If there exist in the database at least two other customers who have purchased the user-selected book and those at least two customers have also purchased other books (or other products) in common, then the Affinity™ hypertext link will appear in the display page for the selected book" (Column 3, lines 14-45).

The examiner notes that the recommendations of **Stack's** system in Figure 3E are clearly not directly queried from the user (the original query was "Clear and Present Danger").

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Stack's** would have allowed **Wyzga's** to provide a method to improve the efficiency querying from users by substantially reducing the degree of customer input, as noted by **Stack** (Column 1, lines 36-40).

Regarding claim 34, **Wyzga** further teaches a method comprising:

A) wherein said at least one electronic database comprises a plurality of law enforcement databases (Paragraphs 46-49, Figure 7).

The examiner notes that **Wyzga** teaches "**wherein said at least one electronic database comprises a plurality of law enforcement databases**" as "Police Department B 706 and Police Department C 708 are other police departments. Police Department B 706 and Police Department C 708 share multiple databases B, C 710. Databases B, C 710 are other databases designed in accordance with the present invention. Police Department B 706 and Police Department C 708 can run queries on databases B, C 710 and information returned could contain data derived from Police Department B 706 and Police Department C 708" (Paragraph 48) and "Police

Department A is also able to access databases B, C 710 via connection 703. Connection 703 can be any wired or wireless connection, direct or over a network. In some embodiments of this invention, this connection can be encrypted and secured. In one embodiment the connection is over the Internet wherein a user at Police Department A 702 is using a web browser to access databases B, C, 710" (Paragraph 49).

Regarding claim 35, **Wynga** further teaches a method comprising:

A) wherein ones of said plurality of law enforcement databases are geographically dispersed (Paragraphs 46-49, Figure 7).

The examiner notes that **Wynga** teaches "**wherein ones of said plurality of law enforcement databases are geographically dispersed**" as "Police Department B 706 and Police Department C 708 are other police departments. Police Department B 706 and Police Department C 708 share multiple databases B, C 710. Databases B, C 710 are other databases designed in accordance with the present invention. Police Department B 706 and Police Department C 708 can run queries on databases B, C 710 and information returned could contain data derived from Police Department B 706 and Police Department C 708" (Paragraph 48) and "Police Department A is also able to access databases B, C 710 via connection 703. Connection 703 can be any wired or wireless connection, direct or over a network. In some embodiments of this invention, this connection can be encrypted and secured. In one embodiment the connection is over the Internet wherein a user at Police Department A 702 is using a web browser to access databases B, C, 710" (Paragraph 49).

Regarding claim 36, **Wynga** further teaches a method comprising:

A) wherein said plurality of databases comprise a public records database (Figure 5).

The examiner notes that **Wynga** teaches "**wherein said plurality of databases comprise a public records database**" as "License Plate" (Figure 5). The examiner further notes that search box License Plate in Figure 5 allows a registered user to search for public information such as a license plate.

Regarding claim 37, **Wyzga** further teaches a method comprising:

A) wherein said plurality of search information vectors comprise at least two search information vectors selected from the group consisting of contacts information, inmate information, suspect information, end party information, flow of funds information, initial contact information, and public data information (Paragraphs 31, Figure 3).

The examiner notes that **Wyzga** teaches “**wherein said plurality of search information vectors comprise at least two search information vectors selected from the group consisting of contacts information, inmate information, suspect information, end party information, flow of funds information, initial contact information, and public data information**” as “FIG. 3 is an exemplary search page for retrieving search parameters for searching the connect/detect database 106. Illustrated is a connect search screen 300 having a search from section 302 and a search history section 304. Search form 302 includes a race box 305, a last name/organization box 306, a sex box 307, a first name box 308, a middle name/initial box 309, a role box 310 for selecting the role of the individual such as suspect, victim, etc., an age box 311, a date of birth box 312, a height box 313, a phone number box 314, a weight box 315, a social security number box 316, a hair color box 317, an eye color box 319, a license box 323 for entering a driver license number, and a date box 325” (Paragraph 31).

Regarding claim 38, **Wyzga** further teaches a method comprising:

A) presenting said portions of said relevant data for which said confluence is identified to said user (Paragraphs 36 and 43, Figures 4 and 6).

The examiner notes that **Wyzga** teaches “**presenting said portions of said relevant data for which said confluence is identified to said user**” as “Different icons 406 can be provided to provide a visual aid as to what type of person is identified. For example an “!” could mean the person was wanted, two heads and a gun may mean the person is part of a gang and a single head may mean a mug shot is available” (Paragraph 36) and “Detect result screen 600 of FIG. 6 includes a result section 604 that will list objects that are related to the detect search object. For example, one or

more persons might be related to the "vehicle-white pickup" as entered into the search. The names of these persons will then be listed in the result section 604. The result section 604 will also include a summary section 602 that lists how many vehicles, locations, persons and incidents were found that were related to the search term or object" (Paragraph 43).

Regarding claim 39, **Wyzga** further teaches a method comprising:

A) wherein said portions of said relevant data for which said confluence is identified is presented graphically (Paragraphs 36 and 43, Figures 4 and 6).

The examiner notes that **Wyzga** teaches "**wherein said portions of said relevant data for which said confluence is identified is presented graphically**" as "Different icons 406 can be provided to provide a visual aid as to what type of person is identified. For example an "I" could mean the person was wanted, two heads and a gun may mean the person is part of a gang and a single head may mean a mug shot is available" (Paragraph 36) and "Detect result screen 600 of FIG. 6 includes a result section 604 that will list objects that are related to the detect search object. For example, one or more persons might be related to the "vehicle-white pickup" as entered into the search. The names of these persons will then be listed in the result section 604. The result section 604 will also include a summary section 602 that lists how many vehicles, locations, persons and incidents were found that were related to the search term or object" (Paragraph 43).

Regarding claim 40, **Wyzga** does not explicitly teach a method comprising:

A) wherein said graphical presentation includes graphically showing details with respect to relationships between said portions of said relevant data for which said confluence is identified and other data graphically presented.

Stack, however, teaches "**wherein said graphical presentation includes graphically showing details with respect to relationships between said portions of said relevant data for which said confluence is identified and other data graphically presented**" as "Another aspect of the invention is the indication of a

"confidence match" factor as shown in FIG. 3E. The confidence factor is calculated based on the frequency of appearance of the recommended books (or other items) in the histories of the customers who have purchased the selected book (or other item). For example, if ten customers who purchased book A also purchased book B, the confidence factor in the recommendation of book B to a user who selected book A would be 100%. If on the other hand only 7 of the ten customers who purchased book A also purchased book B, the confidence factor for book B would be 70%. As previously explained above, if none of the customers who purchased book A also purchased at least one other book in common, the Affinity™ hyperlink link would not be displayed" (Column 3, lines 51-65, Figure 3E).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Stack's** would have allowed **Wynga's** to provide a method to improve the efficiency querying from users by substantially reducing the degree of customer input, as noted by **Stack** (Column 1, lines 36-40).

Regarding claim 42, **Wynga** does not explicitly teach a method comprising:
A) wherein said graphical presentation includes graphically representing availability of data related to said portions of said relevant data for which said confluence is identified and other data graphically presented.

Stack, however, teaches "wherein said graphical presentation includes graphically representing availability of data related to said portions of said relevant data for which said confluence is identified and other data graphically presented" as "The user may utilize any of these methods to select a particular title. In FIG. 3C, a user has selected the title Clear and Present Danger by author Tom Clancy. As shown in FIG. 3C, any particular title may be available in a number of different formats or editions. Once a specific title is selected from among the choices in FIG. 3C, the host computer 3 determines if there are any possible recommendations available for this particular book. If no other books are available as recommendations, the host computer will not give the user the option to request recommendations; the user can still

purchase the selected title or request other information concerning this book. If other books are available as recommendations the option to request recommendations is supplied to the user in the form of a hypertext display as shown in FIG. 3D as the Affinity™ service. The system determines whether other books are available to be recommended by consulting the customer history database 4. The customer history database includes three relational database tables consisting of Customers, Orders and Items. The tables are related to each by keying unique customer IDs in the Customer table to order numbers in the Orders table and product identification numbers in the Items table. For example, books may be identified by their unique ISBN in the Items table. When a user has selected a particular book, the system searches the database 4 to determine all previous customers who have purchased that book. If there exist in the database at least two other customers who have purchased the user-selected book and those at least two customers have also purchased other books (or other products) in common, then the Affinity™ hypertext link will appear in the display page for the selected book. If the search does not find at least two customers who have purchased the selected book and who have also purchased another book in common, the Affinity™ hypertext link will not appear in the display page. Once the user activates the Affinity™ hypertext link, the books purchased in common will be displayed, as shown in FIG. 3E" (Column 3, lines 14-50, Figures 3C-3E).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Stack's** would have allowed **Wyzga's** to provide a method to improve the efficiency querying from users by substantially reducing the degree of customer input, as noted by **Stack** (Column 1, lines 36-40).

Regarding claim 55, **Wyzga** teaches a method comprising:

- A) receiving user input data identifying initial search vectors (Paragraphs 31-32, Figures 3 and 5);
- B) querying the plurality of databases using a first query created based upon the initial search vectors (Paragraph 36, Figure 4);

C) receiving first results from at least one of the plurality of databases (Paragraph 36, Figure 4).

The examiner notes that **Wyzga** teaches “**receiving user input data identifying initial search vectors**” as “The police officer utilizing the search system enters as much information as is available. For example, the police officer may have a partial first name of a suspect such as “Ed” provided by a witness. The officer, after accessing the person search form, would enter the name “Ed” into the first name block. Since “Ed” may be a common nickname, the officer could enter the name “Ed” along with a symbol that means to search for Ed and all first names that begin with “Ed”, such as the wildcard symbol “*” (Paragraph 32). The examiner further notes that **Wyzga** teaches “**querying the plurality of databases using a first query created based upon the initial search vectors**” as “FIG. 4 shows an exemplary result page 400 for a connect search. Illustrated are a result section 402 and a search history section 404. The result section 402 lists the search results in a table. All first names starting with “Ed” are listed along with the incident number the person is related to, the date of birth of the person if available, the height and weight of the individual if available, known gang affiliation if any and whether a mug shot is available. More details about the individual or incident can be selected and viewed. History section 404 keeps track of executed searches” (Paragraph 36). The examiner further notes that **Wyzga** teaches “**receiving first results from at least one of the plurality of databases**” as “FIG. 4 shows an exemplary result page 400 for a connect search. Illustrated are a result section 402 and a search history section 404. The result section 402 lists the search results in a table. All first names starting with “Ed” are listed along with the incident number the person is related to, the date of birth of the person if available, the height and weight of the individual if available, known gang affiliation if any and whether a mug shot is available. More details about the individual or incident can be selected and viewed. History section 404 keeps track of executed searches” (Paragraph 36).

Wyzga does not explicitly teach:

D) analyzing the first results to identify second level search vectors;

- E) without further user input, querying the plurality of databases using a second query created based upon the second level search vectors; and
- F) receiving second results from at least one of the plurality of databases.

Stack, however, teaches **“analyzing the first results to identify second level search vectors”** as “The host computer 3 contains information regarding goods or services (such as books) for sale and also contains a customer purchasing history database 4 which stores data describing all purchases of previous customers” (Column 2, lines 58-62) and “The user may utilize any of these methods to select a particular title. In FIG. 3C, a user has selected the title Clear and Present Danger by author Tom Clancy. As shown in FIG. 3C, any particular title may be available in a number of different formats or editions. Once a specific title is selected from among the choices in FIG. 3C, the host computer 3 determines if there are any possible recommendations available for this particular book. If no other books are available as recommendations, the host computer will not give the user the option to request recommendations; the user can still purchase the selected title or request other information concerning this book. If other books are available as recommendations the option to request recommendations is supplied to the user in the form of a hypertext display as shown in FIG. 3D as the Affinity™ service. The system determines whether other books are available to be recommended by consulting the customer history database 4. The customer history database includes three relational database tables consisting of Customers, Orders and Items. The tables are related to each by keying unique customer IDs in the Customer table to order numbers in the Orders table and product identification numbers in the Items table. For example, books may be identified by their unique ISBN in the Items table. When a user has selected a particular book, the system searches the database 4 to determine all previous customers who have purchased that book. If there exist in the database at least two other customers who have purchased the user-selected book and those at least two customers have also purchased other books (or other products) in common, then the Affinity™ hypertext link will appear in the display page for the selected book” (Column 3, lines 14-45), **“without further user input, querying the plurality of databases using a second query created based**

upon the second level search vectors" as "The user may utilize any of these methods to select a particular title. In FIG. 3C, a user has selected the title Clear and Present Danger by author Tom Clancy. As shown in FIG. 3C, any particular title may be available in a number of different formats or editions. Once a specific title is selected from among the choices in FIG. 3C, the host computer 3 determines if there are any possible recommendations available for this particular book. If no other books are available as recommendations, the host computer will not give the user the option to request recommendations; the user can still purchase the selected title or request other information concerning this book. If other books are available as recommendations the option to request recommendations is supplied to the user in the form of a hypertext display as shown in FIG. 3D as the Affinity™ service. The system determines whether other books are available to be recommended by consulting the customer history database 4. The customer history database includes three relational database tables consisting of Customers, Orders and Items. The tables are related to each by keying unique customer IDs in the Customer table to order numbers in the Orders table and product identification numbers in the Items table. For example, books may be identified by their unique ISBN in the Items table. When a user has selected a particular book, the system searches the database 4 to determine all previous customers who have purchased that book. If there exist in the database at least two other customers who have purchased the user-selected book and those at least two customers have also purchased other books (or other products) in common, then the Affinity™ hypertext link will appear in the display page for the selected book" (Column 3, lines 14-45), and **"receiving second results from at least one of the plurality of databases"** as "The user may utilize any of these methods to select a particular title. In FIG. 3C, a user has selected the title Clear and Present Danger by author Tom Clancy. As shown in FIG. 3C, any particular title may be available in a number of different formats or editions. Once a specific title is selected from among the choices in FIG. 3C, the host computer 3 determines if there are any possible recommendations available for this particular book. If no other books are available as recommendations, the host computer will not give the user the option to request recommendations; the user can still purchase the selected

title or request other information concerning this book. If other books are available as recommendations the option to request recommendations is supplied to the user in the form of a hypertext display as shown in FIG. 3D as the Affinity™ service. The system determines whether other books are available to be recommended by consulting the customer history database 4. The customer history database includes three relational database tables consisting of Customers, Orders and Items. The tables are related to each by keying unique customer IDs in the Customer table to order numbers in the Orders table and product identification numbers in the Items table. For example, books may be identified by their unique ISBN in the Items table. When a user has selected a particular book, the system searches the database 4 to determine all previous customers who have purchased that book. If there exist in the database at least two other customers who have purchased the user-selected book and those at least two customers have also purchased other books (or other products) in common, then the Affinity™ hypertext link will appear in the display page for the selected book" (Column 3, lines 14-45).

The examiner notes that the recommendations of **Stack's** system in Figure 3E are clearly not directly queried from the user (the original query was "Clear and Present Danger").

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Stack's** would have allowed **Wyzga's** to provide a method to improve the efficiency querying from users by substantially reducing the degree of customer input, as noted by **Stack** (Column 1, lines 36-40).

Regarding claim 57, **Wyzga** further teaches a method comprising:

A) providing a user interface for downloading by the user (Paragraph 20).

The examiner notes that **Wyzga** teaches "providing a user interface for downloading by the user" as "Web browser 110 is operable to run on client computer 102. Web browser 110 is communicates with web server 104 using a protocol such as HTTP. Web browser 110 is operable to receive information in a mark-up language such

as HTML and output a formatted display. Entering the web address or uniform resource locator (URL) of an Intranet or Internet page will retrieve information from a remote server and display the information on client computer 102. In the present invention, the user of client computer 102 will utilize the web browser 110 to search connect/detect database 106. Thus, the user will enter the URL of the search page into the browser. Alternatively, web browser 110 will include a shortcut that can be selected to access the search page. Web browser 110 may also be a script-enabled browser. Web browser 110 is able to run scripting languages such as JavaScript or Jscript to enhance the browser display by helping to draw user interfaces and making displays that are responsive to user interaction. Web browser 110 is also able to execute dynamic HTML pages that can be updated automatically” (Paragraph 20).

Regarding claim 58, **Wyzga** further teaches a method comprising:

A) wherein the user interface is a customized browser that provides a connection to a network hub providing access to the plurality of databases (Paragraphs 20 and 49).

The examiner notes that **Wyzga** teaches “**providing a user interface for downloading by the user**” as “Web browser 110 is operable to run on client computer 102. Web browser 110 is communicates with web server 104 using a protocol such as HTTP. Web browser 110 is operable to receive information in a mark-up language such as HTML and output a formatted display. Entering the web address or uniform resource locator (URL) of an Intranet or Internet page will retrieve information from a remote server and display the information on client computer 102. In the present invention, the user of client computer 102 will utilize the web browser 110 to search connect/detect database 106. Thus, the user will enter the URL of the search page into the browser. Alternatively, web browser 110 will include a shortcut that can be selected to access the search page. Web browser 110 may also be a script-enabled browser. Web browser 110 is able to run scripting languages such as JavaScript or Jscript to enhance the browser display by helping to draw user interfaces and making displays that are responsive to user interaction. Web browser 110 is also able to execute dynamic HTML pages that can be updated automatically” (Paragraph 20) and “Police Department B 706

and Police Department C 708 are other police departments. Police Department B 706 and Police Department C 708 share multiple databases B, C 710. Databases B, C 710 are other databases designed in accordance with the present invention. Police Department B 706 and Police Department C 708 can run queries on databases B, C 710 and information returned could contain data derived from Police Department B 706 and Police Department C 708" (Paragraph 48) and "Police Department A is also able to access databases B, C, 710 via connection 703. Connection 703 can be any wired or wireless connection, direct or over a network. In some embodiments of this invention, this connection can be encrypted and secured. In one embodiment the connection is over the Internet wherein a user at Police Department A 702 is using a web browser to access databases B, C, 710" (Paragraph 49).

Regarding claim 59, **Wynga** further teaches a method comprising:

- A) analyzing the first results to identify interrelated results from two or more of the plurality of databases (Paragraphs 40, 43, and 48, Figures 5-6); and
- B) using the interrelated results (Paragraphs 40, 43, and 48, Figures 5-6).

The examiner notes that **Wynga** teaches "**analyzing the first results to identify interrelated results from two or more of the plurality of databases**" as "Detect search page 500 includes a search form section 502 and a detect search section 504. In search form section 504 a user can enter the term or object along with the specifics about the object such as "vehicle-white pickup" in the blanks of section 504. Then, by selecting the add button, the search term is added to the detect search section 504. The user can then check what objects to search for that are associated with the object or term being searched on in search for box 507. For example, the user can check the boxes for person, location or incident to see if the search object-"vehicle-white pickup" is related to any person, location or incident. The user can also limit the search to certain crime type by selecting limited to crime types box 508. The user will then select run search button 506. Different search pages can be selected by choosing tabs 503. The different pages can be a vehicle search page, an incident search page, a person search page, a property search page and a location search page" (Paragraph 40) and

"Detect result screen 600 of FIG. 6 includes a result section 604 that will list objects that are related to the detect search object. For example, one or more persons might be related to the "vehicle-white pickup" as entered into the search. The names of these persons will then be listed in the result section 604. The result section 604 will also include a summary section 602 that lists how many vehicles, locations, persons and incidents were found that were related to the search term or object" (Paragraph 43), "Police Department B 706 and Police Department C 708 are other police departments. Police Department B 706 and Police Department C 708 share multiple databases B, C 710. Databases B, C 710 are other databases designed in accordance with the present invention. Police Department B 706 and Police Department C 708 can run queries on databases B, C 710 and information returned could contain data derived from Police Department B 706 and Police Department C 708" (Paragraph 48). The examiner notes that **Wyzga** teaches "**using the interrelated results**" as "Detect search page 500 includes a search form section 502 and a detect search section 504. In search form section 504 a user can enter the term or object along with the specifics about the object such as "vehicle-white pickup" in the blanks of section 504. Then, by selecting the add button, the search term is added to the detect search section 504. The user can then check what objects to search for that are associated with the object or term being searched on in search for box 507. For example, the user can check the boxes for person, location or incident to see if the search object-"vehicle-white pickup" is related to any person, location or incident. The user can also limit the search to certain crime type by selecting limited to crime types box 508. The user will then select run search button 506. Different search pages can be selected by choosing tabs 503. The different pages can be a vehicle search page, an incident search page, a person search page, a property search page and a location search page" (Paragraph 40) and "Detect result screen 600 of FIG. 6 includes a result section 604 that will list objects that are related to the detect search object. For example, one or more persons might be related to the "vehicle-white pickup" as entered into the search. The names of these persons will then be listed in the result section 604. The result section 604 will also include a summary section 602 that lists how many vehicles, locations, persons and incidents were found

that were related to the search term or object" (Paragraph 43), "Police Department B 706 and Police Department C 708 are other police departments. Police Department B 706 and Police Department C 708 share multiple databases B, C 710. Databases B, C 710 are other databases designed in accordance with the present invention. Police Department B 706 and Police Department C 708 can run queries on databases B, C 710 and information returned could contain data derived from Police Department B 706 and Police Department C 708" (Paragraph 48).

Wyzga does not explicitly teach:

B) to generate the second level search vectors.

Stack, however, teaches **"to generate the second level search vectors"** as "The user may utilize any of these methods to select a particular title. In FIG. 3C, a user has selected the title Clear and Present Danger by author Tom Clancy. As shown in FIG. 3C, any particular title may be available in a number of different formats or editions. Once a specific title is selected from among the choices in FIG. 3C, the host computer 3 determines if there are any possible recommendations available for this particular book. If no other books are available as recommendations, the host computer will not give the user the option to request recommendations; the user can still purchase the selected title or request other information concerning this book. If other books are available as recommendations the option to request recommendations is supplied to the user in the form of a hypertext display as shown in FIG. 3D as the AffinityTM service. The system determines whether other books are available to be recommended by consulting the customer history database 4. The customer history database includes three relational database tables consisting of Customers, Orders and Items. The tables are related to each by keying unique customer IDs in the Customer table to order numbers in the Orders table and product identification numbers in the Items table. For example, books may be identified by their unique ISBN in the Items table. When a user has selected a particular book, the system searches the database 4 to determine all previous customers who have purchased that book. If there exist in the database at least two other customers who have purchased the user-selected book and those at least two customers have also purchased other books (or other products) in common,

then the Affinity™ hypertext link will appear in the display page for the selected book. If the search does not find at least two customers who have purchased the selected book and who have also purchased another book in common, the Affinity™ hypertext link will not appear in the display page. Once the user activates the Affinity™ hypertext link, the books purchased in common will be displayed, as shown in FIG. 3E" (Column 3, lines 14-50, Figures 3C-3E).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Stack's** would have allowed **Wyzga's** to provide a method to improve the efficiency querying from users by substantially reducing the degree of customer input, as noted by **Stack** (Column 1, lines 36-40).

Regarding claim 60, **Wyzga** further teaches a method comprising:

- A) wherein the user and each of the plurality of databases has been assigned a security level (Paragraphs 25, 46-49, Figure 7); and
- B) further comprising: querying only those of the plurality of databases for which the user's security level allows access (Paragraphs 46-49, Figure 7).

The examiner notes that **Wyzga** teaches "**wherein the user and each of the plurality of databases has been assigned a security level**" as "One or more servlets 116 may also be running under a servlet engine 115. A servlet 116 is a module of code, typically written in as JAVA code, which runs in a server application to answer client requests. These can be contrasted with applets, which run on the client computer 102. In the present invention, servlets 116 will be able to help to return the results of a database query to a client, as well as validate user security" (Paragraph 25), and "Police Department B 706 and Police Department C 708 are other police departments. Police Department B 706 and Police Department C 708 share multiple databases B, C 710. Databases B, C 710 are other databases designed in accordance with the present invention. Police Department B 706 and Police Department C 708 can run queries on databases B, C 710 and information returned could contain data derived from Police Department B 706 and Police Department C 708" (Paragraph 48) and "Police

Department A is also able to access databases B, C 710 via connection 703. Connection 703 can be any wired or wireless connection, direct or over a network. In some embodiments of this invention, this connection can be encrypted and secured. In one embodiment the connection is over the Internet wherein a user at Police Department A 702 is using a web browser to access databases B, C, 710" (Paragraph 49). The examiner further notes that **Wyzga** teaches **"further comprising: querying only those of the plurality of databases for which the user's security level allows access"** as "One or more servlets 116 may also be running under a servlet engine 115. A servlet 116 is a module of code, typically written in as JAVA code, which runs in a server application to answer client requests. These can be contrasted with applets, which run on the client computer 102. In the present invention, servlets 116 will be able to help to return the results of a database query to a client, as well as validate user security" (Paragraph 25), and "Police Department B 706 and Police Department C 708 are other police departments. Police Department B 706 and Police Department C 708 share multiple databases B, C 710. Databases B, C 710 are other databases designed in accordance with the present invention. Police Department B 706 and Police Department C 708 can run queries on databases B, C 710 and information returned could contain data derived from Police Department B 706 and Police Department C 708" (Paragraph 48) and "Police Department A is also able to access databases B, C 710 via connection 703. Connection 703 can be any wired or wireless connection, direct or over a network. In some embodiments of this invention, this connection can be encrypted and secured. In one embodiment the connection is over the Internet wherein a user at Police Department A 702 is using a web browser to access databases B, C, 710" (Paragraph 49).

Regarding claim 62, **Wyzga** does not explicitly teach a method comprising:
A) wherein the second level search vectors are generated from the first results using fuzzy logic.

Stack, however, teaches **"wherein the second level search vectors are generated from the first results using fuzzy logic"** as "The user may utilize any of

these methods to select a particular title. In FIG. 3C, a user has selected the title Clear and Present Danger by author Tom Clancy. As shown in FIG. 3C, any particular title may be available in a number of different formats or editions. Once a specific title is selected from among the choices in FIG. 3C, the host computer 3 determines if there are any possible recommendations available for this particular book. If no other books are available as recommendations, the host computer will not give the user the option to request recommendations; the user can still purchase the selected title or request other information concerning this book. If other books are available as recommendations the option to request recommendations is supplied to the user in the form of a hypertext display as shown in FIG. 3D as the Affinity™ service. The system determines whether other books are available to be recommended by consulting the customer history database 4. The customer history database includes three relational database tables consisting of Customers, Orders and Items. The tables are related to each by keying unique customer IDs in the Customer table to order numbers in the Orders table and product identification numbers in the Items table. For example, books may be identified by their unique ISBN in the Items table. When a user has selected a particular book, the system searches the database 4 to determine all previous customers who have purchased that book. If there exist in the database at least two other customers who have purchased the user-selected book and those at least two customers have also purchased other books (or other products) in common, then the Affinity™ hypertext link will appear in the display page for the selected book. If the search does not find at least two customers who have purchased the selected book and who have also purchased another book in common, the Affinity™ hypertext link will not appear in the display page. Once the user activates the Affinity™ hypertext link, the books purchased in common will be displayed, as shown in FIG. 3E" (Column 3, lines 14-50, Figures 3C-3E).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Stack's** would have allowed **Wyzga's** to provide a method to improve the efficiency

querying from users by substantially reducing the degree of customer input, as noted by **Stack** (Column 1, lines 36-40).

Regarding claim 63, **Wynga** further teaches a method comprising:

- A) wherein the first results are received from two or more of the plurality of databases (Paragraph 48); and
- B) by identifying overlapping data in two or more of the first results (Paragraphs 40, and 43, Figures 5-6).

The examiner notes that **Wynga** teaches “**wherein the first results are received from two or more of the plurality of databases**” as “Police Department B 706 and Police Department C 708 are other police departments. Police Department B 706 and Police Department C 708 share multiple databases B, C 710. Databases B, C 710 are other databases designed in accordance with the present invention. Police Department B 706 and Police Department C 708 can run queries on databases B, C 710 and information returned could contain data derived from Police Department B 706 and Police Department C 708” (Paragraph 48). The examiner further notes that **Wynga** teaches “**by identifying overlapping data in two or more of the first results**” as “Detect search page 500 includes a search form section 502 and a detect search section 504. In search form section 504 a user can enter the term or object along with the specifics about the object such as “vehicle-white pickup” in the blanks of section 504. Then, by selecting the add button, the search term is added to the detect search section 504. The user can then check what objects to search for that are associated with the object or term being searched on in search for box 507. For example, the user can check the boxes for person, location or incident to see if the search object-“vehicle-white pickup” is related to any person, location or incident. The user can also limit the search to certain crime type by selecting limited to crime types box 508. The user will then select run search button 506. Different search pages can be selected by choosing tabs 503. The different pages can be a vehicle search page, an incident search page, a person search page, a property search page and a location search page” (Paragraph 40) and “Detect result screen 600 of FIG. 6 includes a result section 604 that will list

objects that are related to the detect search object. For example, one or more persons might be related to the "vehicle-white pickup" as entered into the search. The names of these persons will then be listed in the result section 604. The result section 604 will also include a summary section 602 that lists how many vehicles, locations, persons and incidents were found that were related to the search term or object" (Paragraph 43). The examiner further wishes to state that the result page of Figure 6 clearly shows the intersection (confluence) of query with respect to the vehicle, location, and incident directions. The examiner further notes that the Person, Location, Vehicle, Property, and Incident tabs of **Wynga's** system each constitute different search directions. Moreover, the examiner further wishes to state that boxes 507 and 508 of **Wynga** clearly shows the ability to search in different directions at a user's discretion by limiting the search to desired crime types of specific properties. The examiner further wishes to state that it is clear from the interface of Figure 5 that different queries from the different search directions (Person, Location, Vehicle, Property, and Incident) can be added to box 504 for a multi-directional search nonetheless.

Wynga does not explicitly teach:

B) wherein the second level search vectors are generated.

Stack, however, teaches "**wherein the second level search vectors are generated**" as "The user may utilize any of these methods to select a particular title. In FIG. 3C, a user has selected the title Clear and Present Danger by author Tom Clancy. As shown in FIG. 3C, any particular title may be available in a number of different formats or editions. Once a specific title is selected from among the choices in FIG. 3C, the host computer 3 determines if there are any possible recommendations available for this particular book. If no other books are available as recommendations, the host computer will not give the user the option to request recommendations; the user can still purchase the selected title or request other information concerning this book. If other books are available as recommendations the option to request recommendations is supplied to the user in the form of a hypertext display as shown in FIG. 3D as the AffinityTM service. The system determines whether other books are available to be recommended by consulting the customer history database 4. The customer history

database includes three relational database tables consisting of Customers, Orders and Items. The tables are related to each by keying unique customer IDs in the Customer table to order numbers in the Orders table and product identification numbers in the Items table. For example, books may be identified by their unique ISBN in the Items table. When a user has selected a particular book, the system searches the database 4 to determine all previous customers who have purchased that book. If there exist in the database at least two other customers who have purchased the user-selected book and those at least two customers have also purchased other books (or other products) in common, then the Affinity™ hypertext link will appear in the display page for the selected book. If the search does not find at least two customers who have purchased the selected book and who have also purchased another book in common, the Affinity™ hypertext link will not appear in the display page. Once the user activates the Affinity™ hypertext link, the books purchased in common will be displayed, as shown in FIG. 3E" (Column 3, lines 14-50, Figures 3C-3E).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Stack's** would have allowed **Wyzga's** to provide a method to improve the efficiency querying from users by substantially reducing the degree of customer input, as noted by **Stack** (Column 1, lines 36-40).

8. Claims 3, 10, 12, 14, 22-24, 26-28, 30-31, and 43-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Wyzga et al.** (U.S. PGPUB 20020107871) in view of **Stack** (U.S. Patent 6,782,370) as applied to claims 1-2, 5-9, 11, 15-20, 25, 29, 32, 34-40, 42, 55, 57-60, and 62-63, and in view of **Crites et al.** (U.S. PGPUB 2003/0126470).

9. Regarding claim 3, **Wyzga** and **Stack** do not explicitly teach a method comprising:

A) wherein said plurality of databases comprise a calling services database and an inmate records database.

Crites, however, teaches "wherein said plurality of databases comprise a calling services database and an inmate records database" as "Each time an

inmate places a call from a correctional facility, a call detail record (CDR) of the call is created. The call detail records of inmate calls typically include the name of the inmate (and/or inmate identification number), the inmate's location, the number called and the date, time and duration of the call. Inmate call control systems may also include certain call monitoring facilities that enable correctional facility personnel to monitor and record inmate calls" (Paragraph 5), and "The security threat group database server 210 updates the security threat group database with the information it has received from the FTP client 208. In addition, the security threat group database server 210 obtains and stores Customer Detail Records or Call Detail Records (CDRs) for inmates from the DOC facilities covered by the system from one or more CDR databases 211 and attempts to determine whether there are correlations" (Paragraph 25).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Crites's** would have allowed **Wyzga's** and **Stack's** to provide a system and method that has the capability of identifying, tracking and correlating the telephone activities and calling patterns of inmates, and in particular, a system that is capable of establishing correlations of inmate calling activities from one correctional institution and system to another so that monitoring resources can best be utilized and inmate participation in security threat groups and other criminal activity can be thwarted, as noted by **Crites** (Paragraph 6).

Regarding claim 10, **Wyzga** and **Stack** do not explicitly teach a method comprising:

A) wherein search information vectors for which said search information vector data is accepted comprise inmate information.

Crites, however, teaches "**wherein search information vectors for which said search information vector data is accepted comprise inmate information**" as "Each time an inmate places a call from a correctional facility, a call detail record (CDR) of the call is created. The call detail records of inmate calls typically include the name of the inmate (and/or inmate identification number), the inmate's location, the number

called and the date, time and duration of the call. Inmate call control systems may also include certain call monitoring facilities that enable correctional facility personnel to monitor and record inmate calls" (Paragraph 5), and "The security threat group database server 210 updates the security threat group database with the information it has received from the FTP client 208. In addition, the security threat group database server 210 obtains and stores Customer Detail Records or Call Detail Records (CDRs) for inmates from the DOC facilities covered by the system from one or more CDR databases 211 and attempts to determine whether there are correlations" (Paragraph 25).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Crites's** would have allowed **Wynga's** and **Stack's** to provide a system and method that has the capability of identifying, tracking and correlating the telephone activities and calling patterns of inmates, and in particular, a system that is capable of establishing correlations of inmate calling activities from one correctional institution and system to another so that monitoring resources can best be utilized and inmate participation in security threat groups and other criminal activity can be thwarted, as noted by **Crites** (Paragraph 6).

Regarding claim 12, **Wynga** and **Stack** do not explicitly teach a method comprising:

A) wherein search information vectors for which said search information vector data is accepted comprise end party information.

Crites, however, teaches "**wherein search information vectors for which said search information vector data is accepted comprise end party information**" as "Each time an inmate places a call from a correctional facility, a call detail record (CDR) of the call is created. The call detail records of inmate calls typically include the name of the inmate (and/or inmate identification number), the inmate's location, the number called and the date, time and duration of the call. Inmate call control systems may also include certain call monitoring facilities that enable correctional facility personnel to

monitor and record inmate calls" (Paragraph 5), "The security threat group database server 210 updates the security threat group database with the information it has received from the FTP client 208. In addition, the security threat group database server 210 obtains and stores Customer Detail Records or Call Detail Records (CDRs) for inmates from the DOC facilities covered by the system from one or more CDR databases 211 and attempts to determine whether there are correlations. Some of the correlations may be determined automatically. For example, an inmate who has been associated with a security threat group may have some or all of his telephone calls tagged as calls possibly related to the SECURITY THREAT GROUP. The system may be programmed to automatically record the names of all inmates who call a telephone number that has been associated with a particular SECURITY THREAT GROUP" (Paragraph 25), and "Called Number" (Paragraph 77, Figures 3-4)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Crites's** would have allowed **Wyzga's** and **Stack's** to provide a system and method that has the capability of identifying, tracking and correlating the telephone activities and calling patterns of inmates, and in particular, a system that is capable of establishing correlations of inmate calling activities from one correctional institution and system to another so that monitoring resources can best be utilized and inmate participation in security threat groups and other criminal activity can be thwarted, as noted by **Crites** (Paragraph 6).

Regarding claim 14, **Wyzga** and **Stack** do not explicitly teach a method comprising:

A) wherein search information vectors for which said search information vector data is accepted comprise initial contact information.

Crites, however, teaches "wherein search information vectors for which said search information vector data is accepted comprise initial contact information" as "Each time an inmate places a call from a correctional facility, a call detail record (CDR) of the call is created. The call detail records of inmate calls typically include the

name of the inmate (and/or inmate identification number), the inmate's location, the number called and the date, time and duration of the call. Inmate call control systems may also include certain call monitoring facilities that enable correctional facility personnel to monitor and record inmate calls" (Paragraph 5), "The security threat group database server 210 updates the security threat group database with the information it has received from the FTP client 208. In addition, the security threat group database server 210 obtains and stores Customer Detail Records or Call Detail Records (CDRs) for inmates from the DOC facilities covered by the system from one or more CDR databases 211 and attempts to determine whether there are correlations. Some of the correlations may be determined automatically. For example, an inmate who has been associated with a security threat group may have some or all of his telephone calls tagged as calls possibly related to the SECURITY THREAT GROUP. The system may be programmed to automatically record the names of all inmates who call a telephone number that has been associated with a particular SECURITY THREAT GROUP" (Paragraph 25), and "STG Code—A field that enables a user to search for all inmates making calls to a telephone number of a name of a person that has been associated with that security threat group code" (Paragraph 78, Figures 3-4)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Crites's** would have allowed **Wyzga's** and **Stack's** to provide a system and method that has the capability of identifying, tracking and correlating the telephone activities and calling patterns of inmates, and in particular, a system that is capable of establishing correlations of inmate calling activities from one correctional institution and system to another so that monitoring resources can best be utilized and inmate participation in security threat groups and other criminal activity can be thwarted, as noted by **Crites** (Paragraph 6).

Regarding claim 22, **Wyzga** and **Stack** do not explicitly teach a method comprising:

A) wherein said at least a portion of said useful data and said another portion of said useful data are presented to show a relationship between said at least a portion of said useful data and said another portion of said useful data.

Crites, however, teaches “**wherein said at least a portion of said useful data and said another portion of said useful data are presented to show a relationship between said at least a portion of said useful data and said another portion of said useful data**” as “The search can return any correlations between inmate telephone activity and known security threat groups or, for example, just that inmate's telephone activity data” (Paragraph 28), “While making a query the investigator can also display the following: 1) How many other inmates are or have been calling the numbers that the specific inmate is calling, who they are, and where they are located” (Paragraphs 33-34), and “3) Whether there are inmates from other correctional facilities calling this same number and whether those inmates have known security threat group affiliations” (Paragraph 36).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Crites's** would have allowed **Wyzga's** and **Stack's** to provide a system and method that has the capability of identifying, tracking and correlating the telephone activities and calling patterns of inmates, and in particular, a system that is capable of establishing correlations of inmate calling activities from one correctional institution and system to another so that monitoring resources can best be utilized and inmate participation in security threat groups and other criminal activity can be thwarted, as noted by **Crites** (Paragraph 6).

Regarding claim 23, **Wyzga** and **Stack** do not explicitly teach a method comprising:

A) wherein said at least a portion of said useful data and said another portion of said useful data are presented as an alert to said user to notify said user of a condition of interest to said user.

Crites, however, teaches “**wherein search information vectors for which said search information vector data is accepted comprise initial contact information**” as “FIG. 5 illustrates an exemplary method of determining a security threat according to this invention. In particular, control begins in step S100 and continues to step S110. In step S110, one or more communications are monitored. Next, in step S120, information regarding the monitored communications is reconciled with information in a security threat database. Then, in step S130, a determination is made whether the monitored communications meet the qualifications for being flagged as a security threat. If the communications are identified as a security threat, control continues to step S140. Otherwise, control jumps to step S160 where the control sequence ends. In step S140, information associated with the suspect communications are logged. Next, in step S150, for example, a designated party is notified of the potential security threat, and/or a filtered or unfiltered report is generated” (Paragraphs 136-137)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Crites’s** would have allowed **Wyzga’s** and **Stack’s** to provide a system and method that has the capability of identifying, tracking and correlating the telephone activities and calling patterns of inmates, and in particular, a system that is capable of establishing correlations of inmate calling activities from one correctional institution and system to another so that monitoring resources can best be utilized and inmate participation in security threat groups and other criminal activity can be thwarted, as noted by **Crites** (Paragraph 6).

Regarding claim 24, **Wyzga** and **Stack** do not explicitly teach a method comprising:

A) wherein said user is one of a plurality of users to which said alert is broadcast.

Crites, however, teaches “**wherein said user is one of a plurality of users to which said alert is broadcast**” as “FIG. 5 illustrates an exemplary method of determining a security threat according to this invention. In particular, control begins in step S100 and continues to step S110. In step S110, one or more communications are

monitored. Next, in step S120, information regarding the monitored communications is reconciled with information in a security threat database. Then, in step S130, a determination is made whether the monitored communications meet the qualifications for being flagged as a security threat. If the communications are identified as a security threat, control continues to step S140. Otherwise, control jumps to step S160 where the control sequence ends. In step S140, information associated with the suspect communications are logged. Next, in step S150, for example, a designated party is notified of the potential security threat, and/or a filtered or unfiltered report is generated" (Paragraphs 136-137)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Crites's** would have allowed **Wyzga's** and **Stack's** to provide a system and method that has the capability of identifying, tracking and correlating the telephone activities and calling patterns of inmates, and in particular, a system that is capable of establishing correlations of inmate calling activities from one correctional institution and system to another so that monitoring resources can best be utilized and inmate participation in security threat groups and other criminal activity can be thwarted, as noted by **Crites** (Paragraph 6).

Regarding claim 26, **Wyzga** and **Stack** do not explicitly teach a method comprising:

A) wherein said utilizing said information vector data to identify at least a portion of said useful data and said utilizing said at least a portion of said useful data to identify another portion of said useful data are performed before an event for post-event analysis of data.

Crites, however, teaches "**wherein said utilizing said information vector data to identify at least a portion of said useful data and said utilizing said at least a portion of said useful data to identify another portion of said useful data are performed before an event for post-event analysis of data**" as "In one example, an investigator will receive intelligence about possible inmate participation in criminal

activity. Such information may include a tip from an informant, information obtained from monitoring a phone call, inmate mail, or other intelligence sources. The information may be specific to a particular inmate or may be general and involve as yet unspecified inmates such as the location of a crime or an unidentified security threat group activity. Examples of such intelligence may include inmate security threat group affiliation, pending or prior drug deals, murder, extortion, or the like. Additionally, for example, queries can be automated and based on, for example, a profile, where for example, inmates with known security threat potential can be monitored more closely than other inmates" (Paragraphs 31-32) and "Then, in step S130, a determination is made whether the monitored communications meet the qualifications for being flagged as a security threat" (Paragraph 136).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Crites's** would have allowed **Wyzga's** and **Stack's** to provide a system and method that has the capability of identifying, tracking and correlating the telephone activities and calling patterns of inmates, and in particular, a system that is capable of establishing correlations of inmate calling activities from one correctional institution and system to another so that monitoring resources can best be utilized and inmate participation in security threat groups and other criminal activity can be thwarted, as noted by **Crites** (Paragraph 6).

Regarding claim 27, **Wyzga** and **Stack** do not explicitly teach a method comprising:

A) wherein said utilizing said information vector data to identify at least a portion of said useful data and said utilizing said at least a portion of said useful data to identify another portion of said useful data are performed before an event for pre-event analysis of data.

Crites, however, teaches "**wherein said utilizing said information vector data to identify at least a portion of said useful data and said utilizing said at least a portion of said useful data to identify another portion of said useful data are performed before an event for pre-event analysis of data**" as "In one example, an

investigator will receive intelligence about possible inmate participation in criminal activity. Such information may include a tip from an informant, information obtained from monitoring a phone call, inmate mail, or other intelligence sources. The information may be specific to a particular inmate or may be general and involve as yet unspecified inmates such as the location of a crime or an unidentified security threat group activity. Examples of such intelligence may include inmate security threat group affiliation, pending or prior drug deals, murder, extortion, or the like. Additionally, for example, queries can be automated and based on, for example, a profile, where for example, inmates with known security threat potential can be monitored more closely than other inmates" (Paragraphs 31-32) and "Then, in step S130, a determination is made whether the monitored communications meet the qualifications for being flagged as a security threat" (Paragraph 136).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Crites's** would have allowed **Wyzga's** and **Stack's** to provide a system and method that has the capability of identifying, tracking and correlating the telephone activities and calling patterns of inmates, and in particular, a system that is capable of establishing correlations of inmate calling activities from one correctional institution and system to another so that monitoring resources can best be utilized and inmate participation in security threat groups and other criminal activity can be thwarted, as noted by **Crites** (Paragraph 6).

Regarding claim 28, **Wyzga** and **Stack** do not explicitly teach a method comprising:

A) wherein said pre-event analysis of data is utilized to proactively identify problems.

Crites, however, teaches "**wherein said pre-event analysis of data is utilized to proactively identify problems**" as "In one example, an investigator will receive intelligence about possible inmate participation in criminal activity. Such information may include a tip from an informant, information obtained from monitoring a phone call, inmate mail, or other intelligence sources. The information may be specific to a

particular inmate or may be general and involve as yet unspecified inmates such as the location of a crime or an unidentified security threat group activity. Examples of such intelligence may include inmate security threat group affiliation, pending or prior drug deals, murder, extortion, or the like. Additionally, for example, queries can be automated and based on, for example, a profile, where for example, inmates with known security threat potential can be monitored more closely than other inmates" (Paragraphs 31-32) and "Then, in step S130, a determination is made whether the monitored communications meet the qualifications for being flagged as a security threat" (Paragraph 136).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Crites's** would have allowed **Wyzga's** and **Stack's** to provide a system and method that has the capability of identifying, tracking and correlating the telephone activities and calling patterns of inmates, and in particular, a system that is capable of establishing correlations of inmate calling activities from one correctional institution and system to another so that monitoring resources can best be utilized and inmate participation in security threat groups and other criminal activity can be thwarted, as noted by **Crites** (Paragraph 6).

Regarding claim 30, **Wyzga** and **Stack** do not explicitly teach a method comprising:

A) wherein said at least a portion of said useful data and said another portion of said useful data are utilized in automatically identifying an individual as a potential suspect in an investigation.

Crites, however, teaches "**wherein said at least a portion of said useful data and said another portion of said useful data are utilized in automatically identifying an individual as a potential suspect in an investigation**" as "The system may be programmed to automatically record the names of all inmates who call a telephone number that has been associated with a particular SECURITY THREAT GROUP. Other correlations and associations may be determined automatically or

performed manually by an investigative query of the database. The correlations and investigations can be performed, for example, on a facility by facility basis, or can be performed between facilities on a global scale to determine call patterns related to security threat groups" (Paragraph 25).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Crites's** would have allowed **Wyzga's** and **Stack's** to provide a system and method that has the capability of identifying, tracking and correlating the telephone activities and calling patterns of inmates, and in particular, a system that is capable of establishing correlations of inmate calling activities from one correctional institution and system to another so that monitoring resources can best be utilized and inmate participation in security threat groups and other criminal activity can be thwarted, as noted by **Crites** (Paragraph 6).

Regarding claim 31, **Wyzga** and **Stack** do not explicitly teach a method comprising:

A) wherein said at least a portion of said useful data comprises particular content of a communication selected from the group consisting of a telephone call, a video communication, and an electronic mail communication.

Crites, however, teaches "**wherein said at least a portion of said useful data comprises particular content of a communication selected from the group consisting of a telephone call, a video communication, and an electronic mail communication**" as "Each time an inmate places a call from a correctional facility, a call detail record (CDR) of the call is created. The call detail records of inmate calls typically include the name of the inmate (and/or inmate identification number), the inmate's location, the number called and the date, time and duration of the call. Inmate call control systems may also include certain call monitoring facilities that enable correctional facility personnel to monitor and record inmate calls" (Paragraph 5), "in general the systems and methods of this invention can be used with any demographic in any environment to monitor any type of electronic communication including, but not

limited to telephone calls, e-mail, instant messaging, electronic chat, paging or the like" (Paragraph 20), and "The security threat group database server 210 updates the security threat group database with the information it has received from the FTP client 208. In addition, the security threat group database server 210 obtains and stores Customer Detail Records or Call Detail Records (CDRs) for inmates from the DOC facilities covered by the system from one or more CDR databases 211 and attempts to determine whether there are correlations. Some of the correlations may be determined automatically. For example, an inmate who has been associated with a security threat group may have some or all of his telephone calls tagged as calls possibly related to the SECURITY THREAT GROUP. The system may be programmed to automatically record the names of all inmates who call a telephone number that has been associated with a particular SECURITY THREAT GROUP" (Paragraph 25).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Crites's** would have allowed **Wyzga's** and **Stack's** to provide a system and method that has the capability of identifying, tracking and correlating the telephone activities and calling patterns of inmates, and in particular, a system that is capable of establishing correlations of inmate calling activities from one correctional institution and system to another so that monitoring resources can best be utilized and inmate participation in security threat groups and other criminal activity can be thwarted, as noted by **Crites** (Paragraph 6).

Regarding claim 43, **Wyzga** and **Stack** do not explicitly teach a method comprising:

A) wherein said related data comprises content of a communication between individuals.

Crites, however, teaches "**wherein said related data comprises content of a communication between individuals**" as "Each time an inmate places a call from a correctional facility, a call detail record (CDR) of the call is created. The call detail records of inmate calls typically include the name of the inmate (and/or inmate

identification number), the inmate's location, the number called and the date, time and duration of the call. Inmate call control systems may also include certain call monitoring facilities that enable correctional facility personnel to monitor and record inmate calls" (Paragraph 5), "in general the systems and methods of this invention can be used with any demographic in any environment to monitor any type of electronic communication including, but not limited to telephone calls, e-mail, instant messaging, electronic chat, paging or the like" (Paragraph 20), "The security threat group database server 210 updates the security threat group database with the information it has received from the FTP client 208. In addition, the security threat group database server 210 obtains and stores Customer Detail Records or Call Detail Records (CDRs) for inmates from the DOC facilities covered by the system from one or more CDR databases 211 and attempts to determine whether there are correlations. Some of the correlations may be determined automatically. For example, an inmate who has been associated with a security threat group may have some or all of his telephone calls tagged as calls possibly related to the SECURITY THREAT GROUP. The system may be programmed to automatically record the names of all inmates who call a telephone number that has been associated with a particular SECURITY THREAT GROUP" (Paragraph 25), and "If the intelligence triggers investigation of a single inmate, the investigator uses the DOC call processing platform to see who that inmate has been calling. In addition, the investigator may listen to one or more calls, since all inmate calls are recorded and logged" (Paragraph 33)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Crites's** would have allowed **Wyzga's** and **Stack's** to provide a system and method that has the capability of identifying, tracking and correlating the telephone activities and calling patterns of inmates, and in particular, a system that is capable of establishing correlations of inmate calling activities from one correctional institution and system to another so that monitoring resources can best be utilized and inmate participation in security threat groups and other criminal activity can be thwarted, as noted by **Crites** (Paragraph 6).

Regarding claim 44, **Wyzga** and **Stack** do not explicitly teach a method comprising:

A) wherein said related data comprises an icon representing a form of communication between individuals.

Crites, however, teaches “**wherein said related data comprises an icon representing a form of communication between individuals**” as “Each column has a sort capability so that once the search results have been retrieved, the user may sort the result set by any one or more of the result fields. For example, results could be sorted by security threat group codes and then further sorted by inmate State ID. A billing name and address (BNA) could be displayed with the called number. Alternatively, a BNA button could be placed next to the called number field so that the user could click to display the BNA data on the called number, if desired” (Paragraph 100)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Crites’s** would have allowed **Wyzga’s** and **Stack’s** to provide a system and method that has the capability of identifying, tracking and correlating the telephone activities and calling patterns of inmates, and in particular, a system that is capable of establishing correlations of inmate calling activities from one correctional institution and system to another so that monitoring resources can best be utilized and inmate participation in security threat groups and other criminal activity can be thwarted, as noted by **Crites** (Paragraph 6).

Regarding claim 45, **Wyzga** and **Stack** do not explicitly teach a method comprising:

A) presenting an alert to a user as a result of identifying said confluence of said portions of said relevant data.

Crites, however, teaches “**presenting an alert to a user as a result of identifying said confluence of said portions of said relevant data**” as “FIG. 5

illustrates an exemplary method of determining a security threat according to this invention. In particular, control begins in step S100 and continues to step S110. In step S110, one or more communications are monitored. Next, in step S120, information regarding the monitored communications is reconciled with information in a security threat database. Then, in step S130, a determination is made whether the monitored communications meet the qualifications for being flagged as a security threat. If the communications are identified as a security threat, control continues to step S140. Otherwise, control jumps to step S160 where the control sequence ends. In step S140, information associated with the suspect communications are logged. Next, in step S150, for example, a designated party is notified of the potential security threat, and/or a filtered or unfiltered report is generated" (Paragraphs 136-137)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Crites's** would have allowed **Wyzga's** and **Stack's** to provide a system and method that has the capability of identifying, tracking and correlating the telephone activities and calling patterns of inmates, and in particular, a system that is capable of establishing correlations of inmate calling activities from one correctional institution and system to another so that monitoring resources can best be utilized and inmate participation in security threat groups and other criminal activity can be thwarted, as noted by **Crites** (Paragraph 6).

Regarding claim 46, **Wyzga** and **Stack** do not explicitly teach a method comprising:

A) wherein said confluence of said portions of said relevant data indicates a condition for which said user has subscribed to alert notifications.

Crites, however, teaches "**wherein said confluence of said portions of said relevant data indicates a condition for which said user has subscribed to alert notifications**" as "In one example, an investigator will receive intelligence about possible inmate participation in criminal activity. Such information may include a tip from an informant, information obtained from monitoring a phone call, inmate mail, or other

intelligence sources. The information may be specific to a particular inmate or may be general and involve as yet unspecified inmates such as the location of a crime or an unidentified security threat group activity. Examples of such intelligence may include inmate security threat group affiliation, pending or prior drug deals, murder, extortion, or the like. Additionally, for example, queries can be automated and based on, for example, a profile, where for example, inmates with known security threat potential can be monitored more closely than other inmates" (Paragraphs 31-32) and "Then, in step S130, a determination is made whether the monitored communications meet the qualifications for being flagged as a security threat" (Paragraph 136).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Crites's** would have allowed **Wyzga's** and **Stack's** to provide a system and method that has the capability of identifying, tracking and correlating the telephone activities and calling patterns of inmates, and in particular, a system that is capable of establishing correlations of inmate calling activities from one correctional institution and system to another so that monitoring resources can best be utilized and inmate participation in security threat groups and other criminal activity can be thwarted, as noted by **Crites** (Paragraph 6).

10. Claims 4, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Wyzga et al.** (U.S. PGPUB 20020107871) in view of **Stack** (U.S. Patent 6,782,370) as applied to claims 1-2, 5-9, 11, 15-20, 25, 29, 32, 34-40, 42, 55, 57-60, and 62-63, and in view of **Brown et al.** (U.S. Patent 5,485,507).

11. Regarding claim 4, **Wyzga** and **Stack** do not explicitly teach a method comprising:

A) wherein said plurality of databases further comprise a commissary services database.

Brown, however, teaches "wherein said plurality of databases further comprise a commissary services database" as "The commissary system is accessed from selected telephone stations of the premise-based telephone system by entering a commissary access number. When the telephone station is connected to the

commissary system, the user is prompted by the voice generating device to enter a personal identifier which the processor uses to access user status information stored in the memory device. The user status information includes, for example, the user name, account balances, and user class which determine the scope of the user's commissary privileges. The message generating device is triggered to prompt the user to input item selection and item quantity information once a valid identifier is entered. This information is compared with the commissary inventory information and with the user status information according to a preselected set of criteria such as inventory availability, the user's commissary privileges, and the user's account balances. A transaction record is generated for each order meeting the preselected criteria and stored in a file for processing. These records are automatically processed by the system to adjust user status information such as account balances and the number of restricted items purchased" (Column 2, lines 12-41).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Brown's** would have allowed **Wyzga's** and **Stack's** to provide an automated system to process and determine commissary orders from incarcerated felons in a prison, as noted by **Brown** (Column 1, lines 41-51).

Regarding claim 13, **Wyzga** and **Stack** do not explicitly teach a method comprising:

A) wherein search information vectors for which said search information vector data is accepted comprise flow of funds information.

Brown, however, teaches "**wherein search information vectors for which said search information vector data is accepted comprise flow of funds information**" as "The commissary system is accessed from selected telephone stations of the premise-based telephone system by entering a commissary access number. When the telephone station is connected to the commissary system, the user is prompted by the voice generating device to enter a personal identifier which the processor uses to access user status information stored in the memory device. The

user status information includes, for example, the user name, account balances, and user class which determine the scope of the user's commissary privileges. The message generating device is triggered to prompt the user to input item selection and item quantity information once a valid identifier is entered. This information is compared with the commissary inventory information and with the user status information according to a preselected set of criteria such as inventory availability, the user's commissary privileges, and the user's account balances. A transaction record is generated for each order meeting the preselected criteria and stored in a file for processing. These records are automatically processed by the system to adjust user status information such as account balances and the number of restricted items purchased" (Column 2, lines 12-41).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Brown's** would have allowed **Wyzga's** and **Stack's** to provide an automated system to process and determine commissary orders from incarcerated felons in a prison, as noted by **Brown** (Column 1, lines 41-51).

12. Claims 21, 41, and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Wyzga et al.** (U.S. PG PUB 2002/0107871) in view of **Stack** (U.S. Patent 6,782,370) as applied to claims 1-2, 5-9, 11, 15-20, 25, 29, 32, 34-40, 42, 55, 57-60, and 62-63, and in view of **Kraay et al.** (U.S. PG PUB 2002/0147707).

13. Regarding claim 21, **Wyzga** and **Stack** do not explicitly teach a method comprising:

A) wherein said graphical details comprise a relative strength of the relationship between at least a portion of said useful data and said another portion of said useful data shown using a line therebetween.

Kraay, however, teaches "wherein said graphical details comprise a relative strength of the relationship between at least a portion of said useful data and said another portion of said useful data shown using a line therebetween" as "Lines are used to connect the circles to represent how different SAR's are related, e.g., social security number, telephone, address, etc. The circles are color coded to signal other

characteristics and relationships. The user may print out reports that describe relationships among the SAR's and relevant information of interest to a criminal investigator. This graphical interface has proven to be an extremely effective data visualization scheme to highlight latent relationships among the data elements" (Paragraph 67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Kraay's** would have allowed **Wyzga's** and **Stack's** to provide a user interface which captures latent relationships and communicates those relationships in a logical, easy-to-understand format, as noted by **Kraay** (Paragraph 67).

Regarding claim 41, **Wyzga** and **Stack** do not explicitly teach a method comprising:

A) wherein said graphical details comprise a relative strength of the relationship between said portions of said useful data and said relevant data for which said confluence is identified and said other data graphically shown using a line therebetween.

Kraay, however, teaches "**wherein said graphical details comprise a relative strength of the relationship between said portions of said useful data and said relevant data for which said confluence is identified and said other data graphically shown using a line therebetween**" as "Lines are used to connect the circles to represent how different SAR's are related, e.g., social security number, telephone, address, etc. The circles are color coded to signal other characteristics and relationships. The user may print out reports that describe relationships among the SAR's and relevant information of interest to a criminal investigator. This graphical interface has proven to be an extremely effective data visualization scheme to highlight latent relationships among the data elements" (Paragraph 67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Kraay's** would have allowed **Wyzga's** and **Stack's** to provide a user interface which

captures latent relationships and communicates those relationships in a logical, easy-to-understand format, as noted by **Kraay** (Paragraph 69).

Regarding claim 61, **Wyzga** further teaches a method comprising:

A) displaying the first results to the user as first icons on a graphical interface (Paragraph 36, Figure 4);

The examiner notes that **Wyzga** teaches “**displaying the first results to the user as first icons on a graphical interface**” as “FIG. 4 shows an exemplary result page 400 for a connect search. Illustrated are a result section 402 and a search history section 404. The result section 402 lists the search results in a table. All first names starting with “Ed” are listed along with the incident number the person is related to, the date of birth of the person if available, the height and weight of the individual if available, known gang affiliation if any and whether a mug shot is available. More details about the individual or incident can be selected and viewed. History section 404 keeps track of executed searches. Different icons 406 can be provided to provide a visual aid as to what type of person is identified. For example an “!” could mean the person was wanted, two heads and a gun may mean the person is part of a gang and a single head may mean a mug shot is available” (Paragraph 36).

Wyzga does not explicitly teach:

C) displaying the second results to the user as second icons.

Stack, however, teaches “**displaying the second results to the user as second icons**” as “The user may utilize any of these methods to select a particular title. In FIG. 3C, a user has selected the title Clear and Present Danger by author Tom Clancy. As shown in FIG. 3C, any particular title may be available in a number of different formats or editions. Once a specific title is selected from among the choices in FIG. 3C, the host computer 3 determines if there are any possible recommendations

available for this particular book. If no other books are available as recommendations, the host computer will not give the user the option to request recommendations; the user can still purchase the selected title or request other information concerning this book. If other books are available as recommendations the option to request recommendations is supplied to the user in the form of a hypertext display as shown in FIG. 3D as the Affinity™ service. The system determines whether other books are available to be recommended by consulting the customer history database 4. The customer history database includes three relational database tables consisting of Customers, Orders and Items. The tables are related to each by keying unique customer IDs in the Customer table to order numbers in the Orders table and product identification numbers in the Items table. For example, books may be identified by their unique ISBN in the Items table. When a user has selected a particular book, the system searches the database 4 to determine all previous customers who have purchased that book. If there exist in the database at least two other customers who have purchased the user-selected book and those at least two customers have also purchased other books (or other products) in common, then the Affinity™ hypertext link will appear in the display page for the selected book. If the search does not find at least two customers who have purchased the selected book and who have also purchased another book in common, the Affinity™ hypertext link will not appear in the display page. Once the user activates the Affinity™ hypertext link, the books purchased in common will be displayed, as shown in FIG. 3E" (Column 3, lines 14-50, Figures 3C-3E).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Stack's** would have allowed **Wynga's** to provide a method to improve the efficiency querying from users by substantially reducing the degree of customer input, as noted by **Stack** (Column 1, lines 36-40).

Wynga and **Stack** do not explicitly teach:

- B) the first icons linked to the user by a line; and
- D) the second icons linked to the first icons associated with the first results that were used to generate the second query.

Kraay, however, teaches “**the first icons linked to the user by a line**” as “Lines are used to connect the circles to represent how different SAR’s are related, e.g., social security number, telephone, address, etc. The circles are color coded to signal other characteristics and relationships. The user may print out reports that describe relationships among the SAR’s and relevant information of interest to a criminal investigator. This graphical interface has proven to be an extremely effective data visualization scheme to highlight latent relationships among the data elements” (Paragraph 67), and “**the second icons linked to the first icons associated with the first results that were used to generate the second query**” as “Lines are used to connect the circles to represent how different SAR’s are related, e.g., social security number, telephone, address, etc. The circles are color coded to signal other characteristics and relationships. The user may print out reports that describe relationships among the SAR’s and relevant information of interest to a criminal investigator. This graphical interface has proven to be an extremely effective data visualization scheme to highlight latent relationships among the data elements” (Paragraph 67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Kraay’s** would have allowed **Wynga’s** and **Stack’s** to provide a user interface which captures latent relationships and communicates those relationships in a logical, easy-to-understand format, as noted by **Kraay** (Paragraph 69).

14. Claim 56 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Wynga et al.** (U.S. PGPUB 20020107871) in view of **Stack** (U.S. Patent 6,782,370) as applied to claims 1-2, 5-9, 11, 15-20, 25, 29, 32, 34-40, 42, 55, 57-60, and 62-63, and in view of **Weinreich et al.** (U.S. Patent 6,175,831).

15. Regarding claim 56, **Wynga** and **Stack** do not explicitly teach a method comprising:

- A) analyzing the second level results to identify third level search vectors;
- B) without further user input, querying the plurality of databases using a third query created based upon the third level search vectors; and;

C) receiving third results from at least one of the plurality of databases.

Weinreich, however, teaches **“analyzing the second level results to identify third level search vectors”** as “If, however, the e-mail address is valid, routine Person_Connect_E-mail is called by COLD FUSION 60 at step 1004. At step 1005, a determination is made as to whether the entered e-mail address is listed in database 70. If the e-mail address is not found in database 70, step 1005A is executed notifying the user that the e-mail address is unknown. If the output of 1005 is yes, then step 1006 is called to determine whether a connection has been found between the user and the search criteria, e.g., geography, occupation, etc. If not, then step 1006A is executed informing the user. If, however, a connection is found, then step 1007 is called to determine whether the connection in step 1006 is only a “first degree” relationship. A first degree relationship is one wherein a user has a confirmed relationship with another user in the database 70 (or by the other user listing him in the database 70). A “second degree” relationship is when the connection includes a first degree relationship, as between USER1 and USER2, and a separate defined relationship as between USER2 and USER3, and the connection is made between USER1 and USER3 by the chain of two linked defined relationships. Thus, an N degree relationship is a chain of N linked first degree relationships. It is to be understood that DSP 12 could monitor the number of relationships by degree number (first degree, second degree etc.) and notify the user, for example, via e-mail how his relationships have compiled over a period of time” (Column 21, lines 63-67-Column 22, lines 1-20), **“without further user input, querying the plurality of databases using a third query created based upon the third level search vectors”** as “If, however, the e-mail address is valid, routine Person_Connect_E-mail is called by COLD FUSION 60 at step 1004. At step 1005, a determination is made as to whether the entered e-mail address is listed in database 70. If the e-mail address is not found in database 70, step 1005A is executed notifying the user that the e-mail address is unknown. If the output of 1005 is yes, then step 1006 is called to determine whether a connection has been found between the user and the search criteria, e.g., geography, occupation, etc. If not, then step 1006A is executed informing the user. If, however, a connection is found, then step 1007 is called to

determine whether the connection in step 1006 is only a "first degree" relationship. A first degree relationship is one wherein a user has a confirmed relationship with another user in the database 70 (or by the other user listing him in the database 70). A "second degree" relationship is when the connection includes a first degree relationship, as between USER1 and USER2, and a separate defined relationship as between USER2 and USER3, and the connection is made between USER1 and USER3 by the chain of two linked defined relationships. Thus, an N degree relationship is a chain of N linked first degree relationships. It is to be understood that DSP 12 could monitor the number of relationships by degree number (first degree, second degree etc.) and notify the user, for example, via e-mail how his relationships have compiled over a period of time" (Column 21, lines 63-67-Column 22, lines 1-20), and **"receiving third results from at least one of the plurality of databases"** as "If, however, the e-mail address is valid, routine Person_Connect_E-mail is called by COLD FUSION 60 at step 1004. At step 1005, a determination is made as to whether the entered e-mail address is listed in database 70. If the e-mail address is not found in database 70, step 1005A is executed notifying the user that the e-mail address is unknown. If the output of 1005 is yes, then step 1006 is called to determine whether a connection has been found between the user and the search criteria, e.g., geography, occupation, etc. If not, then step 1006A is executed informing the user. If, however, a connection is found, then step 1007 is called to determine whether the connection in step 1006 is only a "first degree" relationship. A first degree relationship is one wherein a user has a confirmed relationship with another user in the database 70 (or by the other user listing him in the database 70). A "second degree" relationship is when the connection includes a first degree relationship, as between USER1 and USER2, and a separate defined relationship as between USER2 and USER3, and the connection is made between USER1 and USER3 by the chain of two linked defined relationships. Thus, an N degree relationship is a chain of N linked first degree relationships. It is to be understood that DSP 12 could monitor the number of relationships by degree number (first degree, second degree etc.) and notify the user, for example, via e-mail how his relationships have compiled over a period of time" (Column 21, lines 63-67-Column 22, lines 1-20).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references because teaching **Weinreich's** would have allowed **Wyzga's** and **Stack's** to provide a method for users to be consequently linked to a plurality of other such individuals who have similarly provided information based on defined linking relationships, as noted by **Weinreich** (Column 2, lines 18-20).

Response to Arguments

16. Applicant's arguments filed 04/16/2008 have been fully considered but they are not persuasive.

Applicants argue on pages 14-15 that **"Thus, the user is required to select the title, which is presented to the user among the other search results. Accordingly, this search for indirectly related data is triggered by the user's selection one of a title that was presented to the user in a first search. The stack system does not automatically perform a search for recommended books. Instead, the search for recommended books only occurs after a title is selected by the user. Accordingly, Stack, either alone, or in combination with Wyzga fails to teach each and every limitation of claims 1, 32, and 47, respectively"**. However, the language of the independent claims merely state **"utilizing said at least a portion of said useful data identified in said at least one database using said information vector to access at least another database of said plurality of databases to identify another portion of said useful data therein"**. The examiner interprets this limitation as using the results of a search query to query another database to deliver indirect results to a user. Furthermore, the examiner wishes to refer to Column 3 of **Stack** which states **"The host computer 3 contains information regarding goods or services (such as books) for sale and also contains a customer purchasing history database 4 which stores data describing all purchases of previous customers"** (Column 2, lines 58-62) and **"The user may utilize any of these methods to select a particular title. In FIG. 3C, a user has selected the title Clear and Present Danger by author Tom Clancy. As shown in FIG. 3C, any particular title may be available in a number of different formats or editions. Once a specific title is selected from among the choices in FIG. 3C, the host computer 3**

Art Unit: 2169

determines if there are any possible recommendations available for this particular book. If no other books are available as recommendations, the host computer will not give the user the option to request recommendations; the user can still purchase the selected title or request other information concerning this book. If other books are available as recommendations the option to request recommendations is supplied to the user in the form of a hypertext display as shown in FIG. 3D as the Affinity™ service. The system determines whether other books are available to be recommended by consulting the customer history database 4. The customer history database includes three relational database tables consisting of Customers, Orders and Items. The tables are related to each by keying unique customer IDs in the Customer table to order numbers in the Orders table and product identification numbers in the Items table. For example, books may be identified by their unique ISBN in the Items table. When a user has selected a particular book, the system searches the database 4 to determine all previous customers who have purchased that book. If there exist in the database at least two other customers who have purchased the user-selected book and those at least two customers have also purchased other books (or other products) in common, then the Affinity™ hypertext link will appear in the display page for the selected book" (Column 3, lines 14-45). Moreover, Figure 3c of **Stack** depicts search results from a submitted user query. Moreover, Figure 3e depicts the additional results located by the search result of Figures 3c and 3d. The original user query results in the search results in Figures 3c and 3d. The result of Figures 3c and 3d are used to present the indirect data to the user as shown in Figure 3e. Therefore, **Stack** teaches using data identified in one database (Figures 3c and 3d (Clear and Present Danger)) to locate data in another database (Figure 3e). Furthermore, according to MPEP 2144.04 [R-6], In re, Venner 262 F.2d 91, 95, 120 USPQ 193, 194 (CCPA 1958) (Appellant argued that claims to a permanent mold casting apparatus for molding trunk pistons were allowable over the prior art because the claimed invention combined "old permanent- mold structures together with a timer and solenoid which automatically actuates the known pressure valve system to release the inner core after a predetermined time has elapsed." The court held that broadly providing an automatic or mechanical means to replace a

manual activity which accomplished the same result is not sufficient to distinguish over the prior art.). Thus, modifying a process so that it is automated is not a patently distinguishable feature.

Applicants argue on page 15 that **“The Examiner offers Crites to cure a different deficiency that he admits is missing from the combination of Wyzga and Stack. However, Crites does not, in fact, teach such limitation”**. However, Applicant's arguments do not comply with 37 CFR 1.111(c) because they do not clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections.

Applicants argue on page 16 that **“The Examiner offers Brown to cure a different deficiency that he admits is missing from the combination of Wyzga and Stack. However, Brown does not, in fact, teach such limitation”**. However, Applicant's arguments do not comply with 37 CFR 1.111(c) because they do not clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections.

Applicants argue on page 16 that **“The Examiner offers Kraay to cure a different deficiency that he admits is missing from the combination of Wyzga and Stack. However, Kraay does not, in fact, teach such limitation”**. However, Applicant's arguments do not comply with 37 CFR 1.111(c) because they do not clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections.

Applicants argue on page 17 that **“Accordingly, the cited references do not teach or suggest at least the element of “without further user input, querying the plurality of databases using a second query based upon the second level search vectors”**. However, the language of independent claim 55 merely states **“without further user input, querying the plurality of databases using a second query based upon the second level search vectors”**. The examiner interprets this limitation

as using the results of a search query to query another database to deliver indirect results to a user. Furthermore, the examiner wishes to refer to Column 3 of **Stack** which states "The host computer 3 contains information regarding goods or services (such as books) for sale and also contains a customer purchasing history database 4 which stores data describing all purchases of previous customers" (Column 2, lines 58-62) and "The user may utilize any of these methods to select a particular title. In FIG. 3C, a user has selected the title Clear and Present Danger by author Tom Clancy. As shown in FIG. 3C, any particular title may be available in a number of different formats or editions. Once a specific title is selected from among the choices in FIG. 3C, the host computer 3 determines if there are any possible recommendations available for this particular book. If no other books are available as recommendations, the host computer will not give the user the option to request recommendations; the user can still purchase the selected title or request other information concerning this book. If other books are available as recommendations the option to request recommendations is supplied to the user in the form of a hypertext display as shown in FIG. 3D as the AffinityTM service. The system determines whether other books are available to be recommended by consulting the customer history database 4. The customer history database includes three relational database tables consisting of Customers, Orders and Items. The tables are related to each by keying unique customer IDs in the Customer table to order numbers in the Orders table and product identification numbers in the Items table. For example, books may be identified by their unique ISBN in the Items table. When a user has selected a particular book, the system searches the database 4 to determine all previous customers who have purchased that book. If there exist in the database at least two other customers who have purchased the user-selected book and those at least two customers have also purchased other books (or other products) in common, then the AffinityTM hypertext link will appear in the display page for the selected book" (Column 3, lines 14-45). Moreover, Figure 3c of **Stack** depicts search results from a submitted user query. Moreover, Figure 3e depicts the additional results located by the search result of Figures 3c and 3d. The original user query results in the search results in Figures 3c and 3d. The result of Figures 3c and 3d are used to present the indirect

data to the user as shown in Figure 3e. Therefore, **Stack** teaches using data identified in one database (Figures 3c and 3d (Clear and Present Danger)) to locate data in another database (Figure 3e). Furthermore, according to MPEP 2144.04 [R-6], In re, Venner 262 F.2d 91, 95, 120 USPQ 193, 194 (CCPA 1958) (Appellant argued that claims to a permanent mold casting apparatus for molding trunk pistons were allowable over the prior art because the claimed invention combined "old permanent- mold structures together with a timer and solenoid which automatically actuates the known pressure valve system to release the inner core after a predetermined time has elapsed." The court held that broadly providing an automatic or mechanical means to replace a manual activity which accomplished the same result is not sufficient to distinguish over the prior art.). Thus, modifying a process so that it is automated is not a patently distinguishable feature.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Article entitled: "Coplink: A Case of Intelligent Analysis and Knowledge Management", by **Hauck et al.**, dated December 1999. The subject matter disclosed therein is pertinent to that of claims 1-32, 34-46, and 55-63 (e.g., methods to provide searching/querying abilities to law enforcement personnel for inmate and criminal monitoring and research).

Article entitled: "COPLINK nabs criminals faster", by **Fischer** dated 07 January 2001. The subject matter disclosed therein is pertinent to that of claims 1-32, 34-46, and 55-63 (e.g., methods to provide searching/querying abilities to law enforcement personnel for inmate and criminal monitoring and research).

Article entitled: "Building an Infrastructure for Law Enforcement Information Sharing and Collaboration: Design Issues and Challenges", by **Chau et al.** dated 2001. The subject matter disclosed therein is pertinent to that of claims 1-32, 34-46, and 55-63 (e.g., methods to provide searching/querying abilities to law enforcement personnel for inmate and criminal monitoring and research).

U.S. Patent 7,039,171 issued to **Gickler** on 02 May 2006. The subject matter disclosed therein is pertinent to that of claims 1-32, 34-46, and 55-63 (e.g., methods to provide searching/querying abilities to law enforcement personnel for inmate and criminal monitoring and research).

U.S. PGPUB 2001/0036821 issued to **Gainesboro et al.** on 01 November 2001. The subject matter disclosed therein is pertinent to that of claims 1-32, 34-46, and 55-63 (e.g., methods to provide searching/querying abilities to law enforcement personnel for inmate and criminal monitoring and research).

U.S. PGPUB 2002/0069084 issued to **Donovan** on 06 January 2002. The subject matter disclosed therein is pertinent to that of claims 1-32, 34-46, and 55-63 (e.g., methods to provide searching/querying abilities to law enforcement personnel for inmate and criminal monitoring and research).

U.S. Patent 6,173,284 issued to **Brown et al.** on 09 January 2001. The subject matter disclosed therein is pertinent to that of claims 1-32, 34-46, and 55-63 (e.g., methods to provide searching/querying abilities to law enforcement personnel for inmate and criminal monitoring and research).

U.S. PGPUB 2003/0070076 issued to **Michael** on 10 April 2003. The subject matter disclosed therein is pertinent to that of claims 1-32, 34-46, and 55-63 (e.g., methods to provide searching/querying abilities to law enforcement personnel for inmate and criminal monitoring and research).

Contact Information

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mahesh Dwivedi whose telephone number is (571) 272-2731. The examiner can normally be reached on Monday to Friday 8:20 am – 4:40 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Vo can be reached (571) 272-3642. The fax number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Art Unit: 2169

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mahesh Dwivedi

Patent Examiner

Art Unit 2168

June 30, 2008

/Mahesh H Dwivedi/

Examiner, Art Unit 2168

/Pierre M. Vital/

Supervisory Patent Examiner, Art Unit 2169

